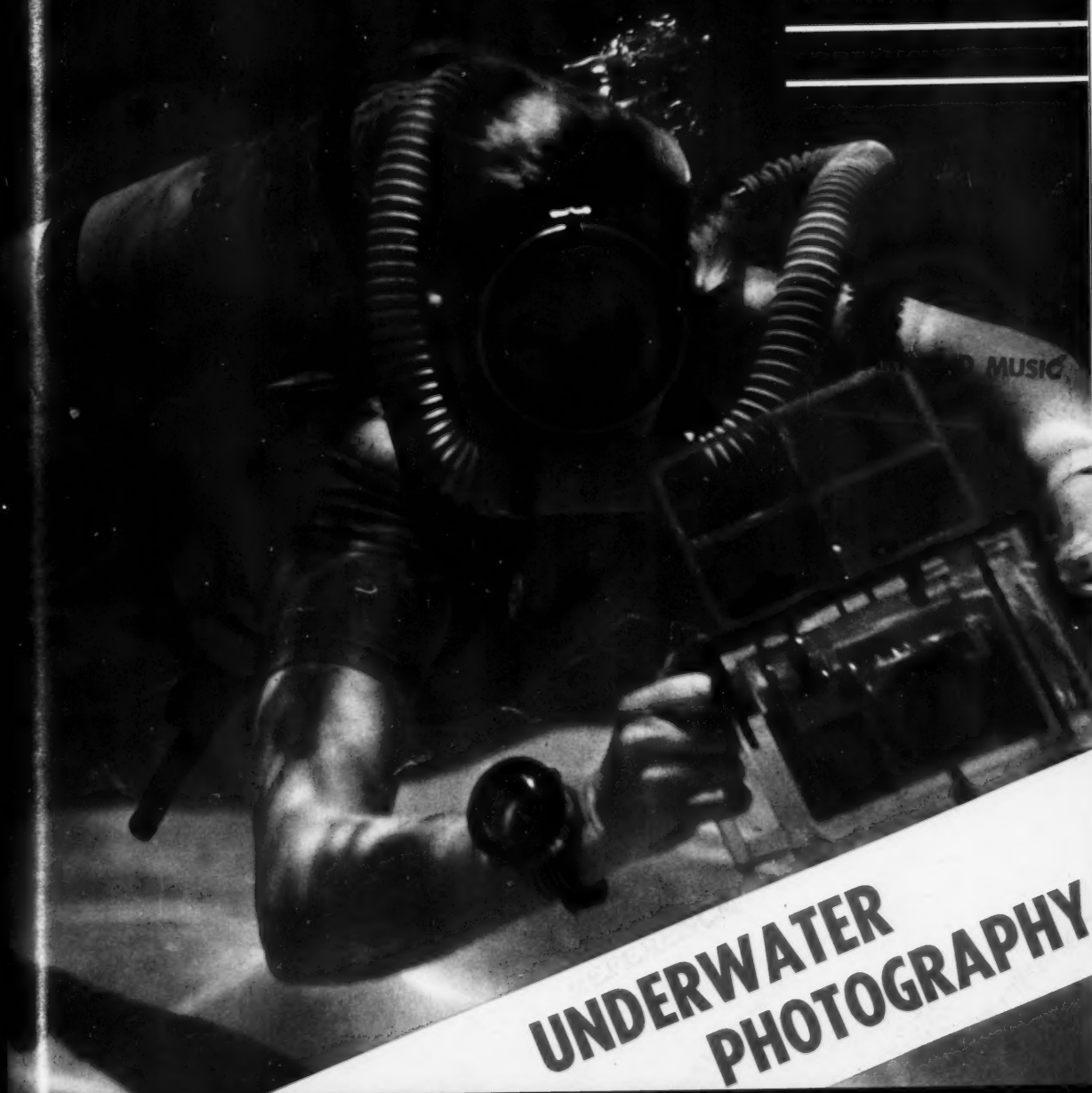


# SKIN DIVER

MAGAZINE

SEPTEMBER  
1959  
35c



UNDERWATER  
PHOTOGRAPHY



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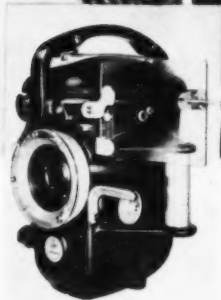
### • **Unique viewfinder system**

Two viewfinders and a special filter are designed to overcome the unusual problems encountered in underwater

filming. Full-view iconometer viewfinder provides built-in parallax correction to 4 feet; front and rear sight-sports viewfinder on locking handle. Neutral filter increases picture contrast, softens blue-green water tones and prevents reflections.

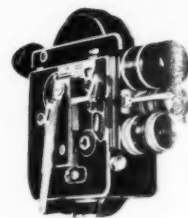
### • **Special extreme wide-angle lenses**

With your Bolex camera and underwater housing you can use wide-angle lenses with the shortest focal lengths in the world. The extreme wide-angle Switar 5.5mm f/1.8 (for 8mm cameras) and Switar 10mm f/1.6 (for 16mm cameras) lenses give you almost unlimited depth of field.



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with all Pro Extras**



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### **Economical Single-lens Bolex**

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### **Take 8mm Movies with 100 Foot Roll!**

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New York 13, N. Y.

Department SD-9  
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New York 13, N. Y.

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Please send me literature on the Bolex Underwater Housing and on the:

(check one)

\_\_\_\_\_ Bolex H-16 REX 16mm camera

\_\_\_\_\_ Bolex H-16M 16mm camera

\_\_\_\_\_ Bolex H-8T 8mm camera

... plus the name of the Bolex dealer nearest me.

Name \_\_\_\_\_

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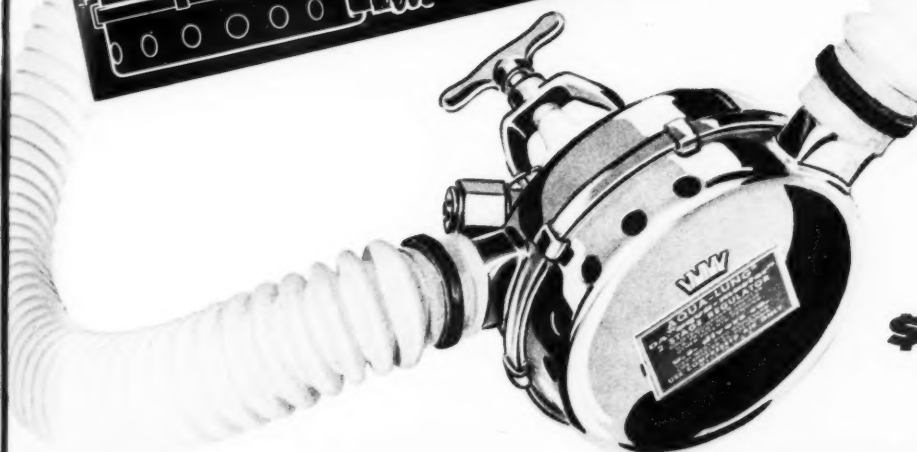
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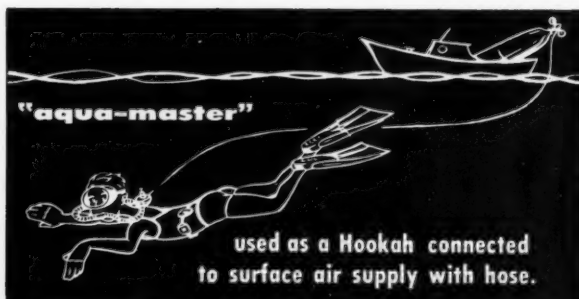
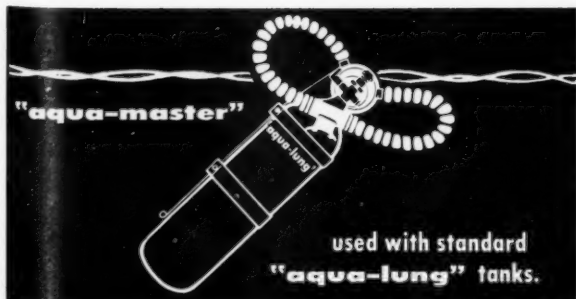
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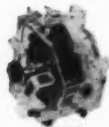


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# UNDERWATER SPORTS

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## New Movies To Premiere At DICK FERG MEMORIAL

By James Dugan

Richard Ferg, eastern diving leader, failed to come up from a dive without apparatus on Long Island, July ninth. The popular diver will be memorialized at a huge meeting, An Evening of Undersea Adventure, in New York on September tenth, at which Captain Jacques Cousteau will present three new films. The affair is sponsored by Ferg's club, the Long Island Dolphins, with the support of the 68 clubs in the Empire State Underwater Council. The lost diver was a founder of both his club and council.

The memorial will be held at 8 p.m. Thursday, September 10, at the Town Hall, 123 West 43, New York. On the program agenda will be Cousteau showing his new undersea color film, "The Sunken Argosy," which tells the story of his group excavating a 205 B.C. Greek wreck in the Mediterranean. It is also expected that he will have color film made on the deepsea floor only a few weeks before during the Atlantic cruise of his research ship the *Calypso*. These exceptionally deep movies are made with "The Halibut," a camera sled carrying a 35mm color unit with synchronized electronic flash lighting.

Commander George F. Bond, USN, New London submarine doctor, will present Navy undersea movies never before seen publicly.

The famous diving team of "The Silent World" will appear at the memorial meeting. Patrons of Honor are Cdr. Bond, J-Y Cousteau, James Dugan, Lloyd Bridges, Peter Gimbel, Roger Caras, Herb Shriner, the Silent World Diving team from the *Calypso* and many other underwater celebrities. The speakers and films are contributed without fee. All proceeds go to the Richard Ferg Memorial Fund. The diver left a widow and a five-day old son.

Tickets for the event can be ordered by mail from the Long Island Dolphins, P.O. Box 165, Flushing 55, N.Y. Check or money order must be enclosed. Orchestra \$3, balcony \$2. Additional information may be obtained from the Long Island Dolphins or by calling INdependence 3-1765.

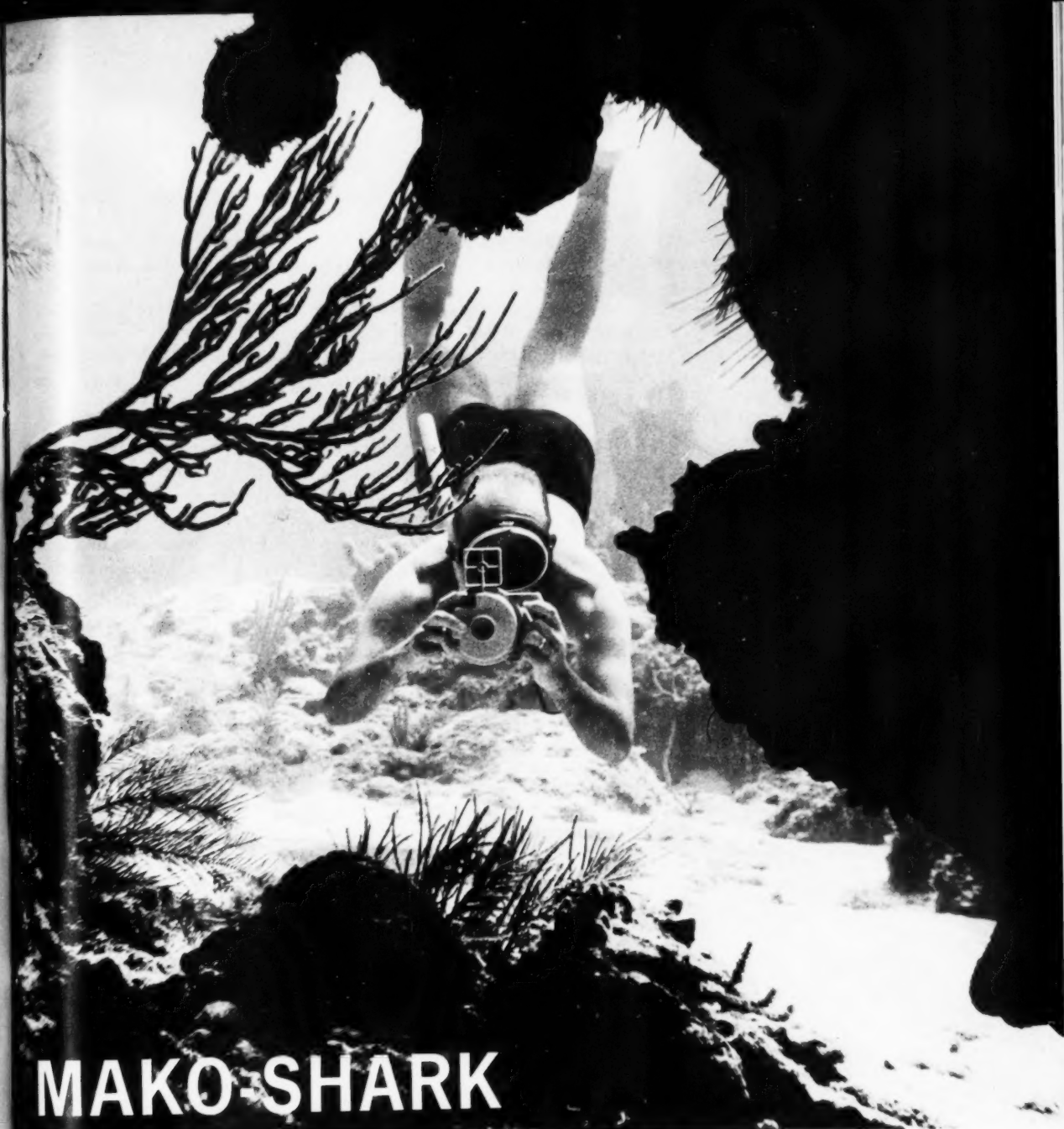


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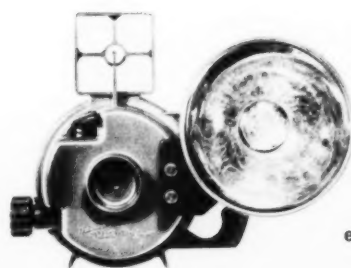
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# SKIN DIVER MAGAZINE

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underwater swimming methods; to encourage and  
promote all types of activities participated in and  
caused by underwater swimming enthusiasts and  
to provide an advertising medium for manufac-  
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## COVER

Underwater photography is fast becoming a  
growing hobby and occupation for many old hat  
divers and at the same time is putting fins, masks  
and lungs on as many photo bugs wanting to  
capture the natural wonders of the underwater  
seascapes, as our cover girl E. M. Batts Jones.  
An artist, writer and photographer, Batts received  
her commercial photography diploma from Santa  
Monica College and plans to specialize in under-  
water photography. She holds a Los Angeles  
County scuba diving certificate and Red Cross in-  
structor cards.—Photo by Fred Zender.

## editorial

This issue of your SDM features a collection of articles about the  
fastest growing phase of the sport of skin diving . . . underwater pho-  
tography. Articles on these pages represent the talents, derived from  
past experience, trial and error, of many of the nation's top photograph-  
ers of undersea scenery and subjects and a few recommendations from  
the manufacturers of waterproof camera housings for underwater use.

Although not everyone in the photo business is represented, we are  
sure that you will be pleased to find film guides, filter charts, developing  
procedures, speeds, settings, etc., that will undoubtedly send you rushing  
to the nearest source of underwater camera equipment and then to the  
closest body of water for a film holiday.

SDM has, in the past, produced camera issues of great importance  
(these copies are still in demand although our back issue supply has long  
since been depleted) but we have never been able to offer such a com-  
plete and thorough collection of advance information. Underwater pho-  
tography has come of age . . . it is now out of the experimentation stage  
and is pure clicking fun for all ages . . . and in many instances a source  
of profit.

We'll let you rest and study this issue for awhile, then we plan to  
spring a submerged color contest that will interest all . . . and we'll  
expect your full cooperation because now you know how. Drag the  
reading lamp a little closer and dig in!!

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# USA

## UNDERWATER SOCIETY OF AMERICA

By **CARL H. HAUBER**

P.O. Box 724, Station A, Champaign, Illinois

**H. V. "PAPPY" FLOOD**  
**JOHN J. McANIFF**  
Publicity Committee

ON THE 26th of this month the Organizing Board of Governors of the Underwater Society of America will meet in Chicago with a single purpose in mind—to ratify the Organization so that it may exist, in and of itself, dedicated to the advancement and refinement of the sport of skin diving.

Believe me, the news has gotten around since the February National Convention. Interest has been expressed by the National Council of Young Men's Christian Associations, the Amateur Athletic Union, the Confederation Mondiale des Activités Sub Aquatiques, and others. National insurance companies have expressed interest in standardized safety programming, possibly in consideration of practical equipment insurance plans. Law firms have requested aid in seeking statutes for the protection of their clients. Two national publications have taken note of the Society and have offered their pages for the printing of material which will interest their readers.

Most gratifying of all have been the letters from diving clubs all over the country, requesting membership in the U. S. A., and information on their closest Councils; and letters from many independent divers, asking for the address of the club or Council nearest them. Thus, even before its official inception, the Society is proving the advantages of a "clearing house" for diving information.

It is sincerely hoped that each and every Council member club has instructed its Council to vote for the ratification of the Underwater Society of America. It is further hoped that the independent clubs of the United States and Canada are contacting their nearest Council with similar instructions. For your convenience, the following form has been included. If you have no information as to the address of your closest Council, complete the form and send it to me. It will be referred to the proper representative at the board meeting.

UNDERWATER SOCIETY OF AMERICA  
Post Office Box 724, Station A  
Champaign, Illinois

We of the \_\_\_\_\_  
(club name)  
cast whatever vote we are entitled to for  
the ratification of the Underwater So-  
ciety of America. We have \_\_\_\_\_  
(number)

members. Our official address is: \_\_\_\_\_

The validity of this vote is conditional upon being referred to the proper representative.

It is understood that we will receive information on membership in this Society just as soon as possible.

OPTIONAL:

We \_\_\_\_\_ wish to become a Charter  
(do/do not)  
Member of the Society. First annual dues

\_\_\_\_\_ be promptly remitted upon  
(will/will not)  
notification by the Society as to the amount.  
We reserve the right to withdraw should we  
consider the amount of annual dues excessive.

Signed: \_\_\_\_\_

Office or Title: \_\_\_\_\_

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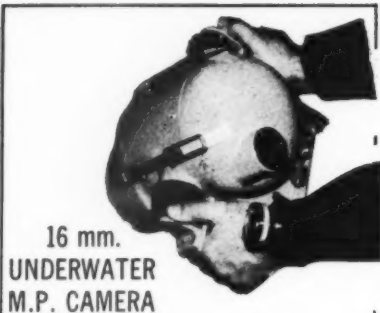
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## \$6096.24 Collected for the U.S. Team to World Championship

The persons, firms and clubs listed below generously contributed financial aid to the United States underwater spearfishing team that competed at the World Championship in Malta on August 15, 1959. This is the first year in the history of U.S. participation in the world event that sufficient funds have been offered the competitors for transportation and travel expenses. Chairman of the Financial Committee during this fund raising campaign is Mr. Nixon Griffiths.

Full results of the world competitions will appear in SDM in the October issue.

Individual Contributions	Amount
Griffis Foundation	\$1,000.00
Brentano's, Inc.	500.00
Gustav Dalla Valle	500.00
"Skin Diver Magazine"	400.00
Leonard Schwartz	150.00
Stanchfield Wright	100.00
Francis S. Leven	100.00
Peter Gimbel	100.00
Barry Cross	100.00
Kenneth Kroehler	100.00
"Sports Illustrated"	100.00
Philip Nash	100.00
Louis Marx	100.00
Michael Lerner	100.00
H. J. Sobilo	100.00
Irving Horowitz	50.00
David S. Meiklejohn	50.00
John B. Mead	50.00
R. L. Tollett	50.00
James White	25.00
Hamilton Potter, Jr.	25.00
William Patterson	25.00
Herb Funke	25.00

## Restoration Hints On Submerged Finds

Objects such as outboard motors, boats, etc., which have been restored to the surface from a fresh water submergence should be treated with kerosene, given a thorough washing. Outboard motors should be stripped down completely, every piece washed, soaked and cleaned in a kerosene bath.

If corrosion is noted after the cleansing, buff or sand the area with emery cloth, then apply a coat of clear lacquer. Corrosion, being a living fungus, must be completely sealed off from air in order to stop its destructive action.

Objects which are restored from salt water should also receive a generous kerosene bath. However, there are very few metals which will withstand the action of sea water for any length of time. Items such as outboard motors and aluminum boats are of little value after a month in salt water—not worth the efforts of salvage. Brass and bronze and monel will withstand salt water damage for extended periods and are worth salvage attempts.—John Cayford, Intl. Undersea Services

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James McCarthy	10.00
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John Thomas Mackelfresh	5.00
Robert C. Baldrige	5.00
Dr. T. L. Greathouse	5.00
Malcolm McNaught	5.00
Daniel B. Bartram, Jr.	5.00
Louis A. Venuti	3.50
Ernest Gartz	1.00
David Thomas	1.00
Bill Salter	1.00
Andre Klein	1.00
J. Hejda	1.00
Robert B. Frank	1.00
F. M. Justine	1.00

Club Contributions	Amount
Water Wiggers, Florida	\$ 52.00
Humbolt Divers, California	30.00
Inland Divers, Texas	30.00
Depth Chargers, Penna.	30.00
Dixie Divers, La.	30.00
Miami Makos, Florida	30.00
South Shore Neptunes, Mass.	30.00
Long Beach Neptunes, Calif.	30.00
Aqua Divers, Indiana	30.00
Atlanta YMCA, Georgia	30.00
Gulls & Buoy, Calif.	30.00
Kelp Klippers, Calif.	30.00
Marine Alpines, Maine	25.00
Kansas City Frogmen, Mo.	21.35
Dallas Divers, Texas	20.00
Long Island Dolphins, N. Y.	15.00
Massachusetts Sea Lions, Mass.	15.00
North Shore Frogmen, Mass.	15.00
The Bubbles, Illinois	15.00
Undersea Explorers, Va.	15.00
Westchester Tritons, N. Y.	13.25
Palm Beach Fin Divers, Fla.	13.00
Lake Serpents, New York	10.00
N.J. Skin Diving Club, N.J.	10.00
Newport Whalers, Calif.	10.00
Lung Busters, Calif.	10.00
Flipper Dippers, Va.	10.00
Long Island Divers, N. Y.	10.00
Sub-Surface Sirs, Indiana	10.00
Saratoga Sea Scavengers, N. Y.	10.00
Depth Chargers of Chicago, Ill.	10.00
Neptune Angels, Florida	10.00
New York Amphibians, N. Y.	10.00
Sea Lions of San Mateo, Calif.	10.00
Newport Sub-Mariners, Calif.	10.00
Spokane Divers, Washington	10.00
Seafarers, Calif.	10.00
Douglas Skin Diving Club, Calif.	10.00
Santa Monica Sea Lancers, Calif.	10.00
Sharks Underwater Club, Calif.	5.00
Muirmen, Calif.	5.00
Bay State Aqua Club, Mass.	5.00
Knoxville YMCA, Tenn.	5.00
Westfins Scuba Divers, N. J.	5.00
Midwest Amphibs, Wisconsin	5.00
Fairhaven Whalers, Mass.	5.00
Dolphins, Washington	3.00
Dolphins YMCA, Wash.	3.00
Long Island Sea Lions, N. Y.	3.00
S.P.A. AAU Committee	50.00

Film Showings	Amount
Will Jacobs, Hartford, Conn.	\$ 108.67
Cressi Underwater Equip. Co., Los Angeles, Calif.	93.00
Empire State Underwater Council, Flushing, New York	205.00
Illinois Council of Skin & Scuba Divers, Urbana, Ill.	617.00
Jack Tees, Oakland, Calif.	182.97

Compressed Air Stations	Amount
Laguna Seaports, Calif.	\$ (2.00)
Jack the Frogman, Minn.	(2.00)
New England Divers, Mass.	(2.00)
Paragon Sporting Goods	5.00
Penguin Company—4 shirts for team	

**GRAND TOTAL: \$6096.24**

Two round trip fares (\$150) from Miami to NYC raised through efforts of Harry Hood Basset, First Natl. Bank of Miami and Lew Price, City of Miami Publicity Director.

**SKIN DIVER—September 1959**





### Clyde Kager To Direct Cornelius Compressor Sales

Clyde R. Kager has been named a sales representative of The Cornelius Company portable air compressor division, Minneapolis, it has been announced by Joseph W. Mahanay, sales manager of the portable air compressor and aviation divisions.

Kager will be concerned with compressor sales in fire, industrial safety and skin diving fields. He formerly was a fund-raising director for the Wells Organization and previously was a U.S.O. field representative.

### Lifting Power of the Common Inner Tube

The ordinary automotive inner tube has been employed numerous times in raising sunken logs and other small objects. The lifting capacity varies with the volume of air injected. A tube fully inflated will lift and float approximately 250 lbs. Depth, however, governs the volume of air in the tube.

For the raising of a 250 lb. object from 33 ft. underwater, more than one tube will be required. If the tube were fully inflated at this depth, and managed to reach the surface, it would be more than twice its normal inflated size. However, near the 10 ft. mark, it is more than likely to burst or rupture. REASON: The pressure at 33 ft. is 28 pounds per square inch, while at surface it is 14.7 psi. As the tube ascends from 33 ft., the pressure lessens 1/2 lb. for each foot ascended. Thus the volume of air in the tube expands in the lesser pressure stratas, finally causing the tube to rupture.

Logs can be raised in shallow water (up to a maximum of 20 ft.) as they have some buoyancy remaining even though they are submerged.

The poor feature about the inner tube relative to raising sunken objects is that the inflation valve has no means by which air is permitted to escape as the pieces ascend. The rupturing of an inner tube underwater can cause quite an explosion, and I strongly advise against the use of inner tubes in raising sunken objects.—John Cayford, Intl. Undersea Services.

### Anti-Litterbug Program Begins

A new program intended to educate hunters and fishermen on the importance of leav-

ing clean campsites and not littering public or private land is being undertaken by the Calif. Department of Fish & Game.

Director William E. Warne said the problem of the litterbug is of vital importance to the future of outdoor recreation in California, particularly as it concerns the opening of private land to hunters and fishermen.

"We are going to try to impress the sportsmen that they must form the habit of cleaning up after themselves if they expect to be permitted on privately owned land," Warne said.

"While hunting and fishing opportunity is constantly being decreased by the expansion of suburban residential and industrial development, additional thousands of acres of farm and ranch land are being closed to sportsmen by landholders who don't want their property to look like a garbage dump. If property owners could be sure hunters and fishermen would keep the premises clean, much of this land might be opened."

Warne noted that hunters and fishermen certainly aren't the only litterbugs, but it is hoped that they, individually and through their sportsmen's organizations, will take the lead in the fight to make California a clean state in which to live and play.

### Found

Chuck Kramer returned home from a Sunday dive in the Palos Verdes (California) area on August 2 with two Waterlung regulators . . . someone had dropped an extra regulator into his gear bag. The regulator can be claimed at Cal-Aquatics, 7417 Lankershim Blvd., North Hollywood, by showing proof of ownership.

### Lost, Strayed or Stolen

A 1953 or 54 Dive-Air regulator and tank have been reported missing by John Bozart, 13418 Moor Park, Sherman Oaks, Calif. Bozart lost the equipment while his car was parked in downtown Los Angeles. Dive shop owners have been asked to watch for the regulator (the serial number is 10466). Any information regarding the above equipment should be reported to the Los Angeles Police Department—the Central Auto Theft division.

### North Coast Championships

The Sonoma County Reef Runners wish to invite all skin divers to attend the competition dive at historic Fort Ross on the Sonoma Coast, September 13th, 1959. IT IS FOR INDIVIDUALS, NOT TEAMS. There will be trophies and prizes. Fort Ross is located 13 miles above Jenner, and is noted for its calm water (about 15 to 30 foot visibility) and abundance of ling cod and cabazone. Diving starts at 10:30 a.m. and is for four hours. AAU Rules of competition. For more information call Dr. John Wion, Li 5-2199 or Al Hart, Li 5-1381 in Santa Rosa, California.

### From The Horse's Mouth

According to an item from the Virginia Tidewater Anglers Club, a commercial trawler captain was asked if it were not possible, today, with modern equipment and fish detection gear to take fish in greater quantities with greater ease. He replied, "Yes, modern equipment is so efficient that we are capturing them faster than they come back and we have to go farther and farther to take fewer and fewer fish." Who could say it better?—Sport Fishing Institute

### Underwater Motion Picture Camera Housings for Bell & Howell 16mm or 35mm —TV Camera Housings

#### FINGER TIP CONTROLS



\$370\*

#### ELECTRIC OR HAND-WIND

"Pro-Sportsman"—The 16mm Pro-Sportsman underwater housing designed for the semi-professional photographer, encompasses all the features of the 35mm and Television housings. High grade aluminum casting, heat treated to withstand external pressures. Because of the close tolerances which are maintained pressurization is not required in depths less than 250 ft.

#### ONE-MAN OPERATION NEUTRAL BUOYANCY

#### BUILT-IN LIGHT METERS



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"400"—35mm operator's eye-view of the 35mm housing showing the pistol grip handles affording finger tip controls for focus and f. stop—large sweep hand dials for quick, clear calibration readings. The unit is powered by 12-volt Yardney silvercel battery. 400' magazine.

#### SCANASCOPE-WIDE SCREEN. DU MONT, IT&T LING, RCA, ETC.



\$700\*

"TV-500" Television closed circuit unit with DU MONT TV monitor and camera. SAMPSON-HALL housing will accommodate other TV cameras. Operational depths—500 ft. unpressurized. For directors who like to stay dry and topside—install TV system in the "400" motion picture housing.

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### A6 VOIT VIKING SWIM-FINS

They float! Finest skin diving fin for the expert. Extra-length curved stiff propelling surface. Raised ribs for water-channeling action. Soft, comfortable foot-pocket. Custom-fit by shoe size. Two-tone royal blue....\$10.95

### B6B-S VOIT VIKING SWIM MASK

New! Softer Rubber for Comfort and Better Seal. Tapered edges make this mask best for use with suits or lungs. Oval, safety glass lens. Deluxe stainless steel fittings. Deluxe light blue....\$4.95



### B4BS VOIT SKIN DIVER SWIM MASK

Soft, wide face-fitting surface and extra-wide headband. Most comfortable mask available. Oval shape. Deluxe stainless steel fittings. Blue with safety glass lens....\$4.95

### F4 VOIT SKIN DIVER SNORKLE

Easy breathing, proven design. Light, durable plastic. Flexible tube yields to underwater obstacles. Strap adapter. Blue and grey....\$1.95



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**SAMPSON-HALL CLOSED CIRCUIT TV HOUSING**—For attended or unattended shooting down under. Complete equipment includes Du Mont camera, S-H housing, Du Mont monitor, remote control, focusing control, and coax cable. Can be used in unlimited ways . . . treasure hunting, geology studies, search and recovery, by commercial fishermen in checking lobster traps, oil surveys, on-the-spot TV coverage. Unit will operate to 500 feet unpressurized and to over 1000 feet pressurized. Price approx. \$3500.00. For illustrated brochure write Sampson-Hall Company, 10561 Sunset Blvd., Los Angeles 24, Calif.



**CUSTOM CLUB PLAQUES**—Made of cast aluminum. Your club plaque on your car is your calling card, an introduction to other divers, and to those interested in diving. Stock designs—Lung Diver, Spearfisherman, Snorkeler, Mermald and Divers Flag, \$3.00 each for 10 or more. Custom design slightly more. Write for additional information. Blue Star Supply, 2156 Pacheco St., Concord, Calif.



**LAXTO NOSE CLIP**—Divers who use a nose clip under their face masks to help equalize pressure will be interested in the LAXTO, an accessory that requires no headband and that features a plastic covering on a durable frame. Three sizes are available: large, average, and small. Imported from England and distributed exclusively in the United States by Jole Company, 1027 Camino Ricardo, San Jose 25, California, LAXTO clips can be ordered directly, and can be purchased at popular sporting goods and drug stores. Price is 89c per clip, plus sales tax for California customers. Write for LAXTO literature.

SKIN DIVER—September 1959

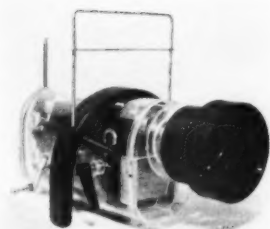
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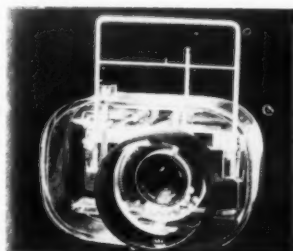
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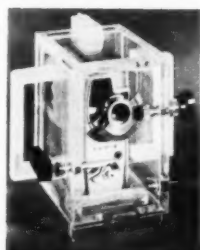
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**DOLPHIN 16 CASE**—A compact heavy-duty professional case, for the Eastman K-100 and the Cine Special having all controls and room for retrofocus WA lenses. For illustrated brochure and price list write—Sea Venture Products, P.O. Box 83, Inwood Station, New York 34, N. Y.



**THE DOLPHIN 35 CASE**—This case can be equipped with all the top 35mm cameras having 28mm, 35mm and 50mm lenses. Controls will be fitted on order at the factory. All Dolphin camera cases have, at no extra cost, a watertight through plug for flash. For illustrated brochure and price list write—Sea Venture Products, P.O. Box 83, Inwood Station, New York 34, N. Y.



**NEW MAKO EUMIG**—Unlectric eye and electric drive 8mm movie camera. One control operates the entire camera and lens through this Mako housing. Housing \$49.95, camera and housing \$99.50, from—Underwater Sports, Inc., 2219 Biscayne Blvd., Miami, Fla.



**AQUAVISION** is now being made in bifocals for those divers who require this type of eye correction. Aquavision is the prescription-ground, custom-made faceplate that is made to the exact eye prescription for the diver. It gives the diver good underwater vision just as his eyeglasses give him good vision in air. Aquavision is made for all of the good quality masks. The manufacturer guarantees to give good underwater vision or refund full purchase price. Aquavision, 4514 - 8th Ave., N.E., Seattle 5, Wash.

**SKIN DIVER**—September 1959



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Tested And Proven To  
Be The Safest, Simplest  
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Regulator Ever Built!

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## 50-FATHOM REGULATOR AND SAFETY TANK

Beauty, safety and simplicity of operation  
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The new Voit Lung has proven to be the easiest-  
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Test it yourself . . . soon!

Compensated Regulator.  
Easiest breathing at any  
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parts, for safety and ease  
of maintenance.

Brass box, blued. All parts  
free of electrolytic action.

Chrome clips — easy  
maintenance and beauty.

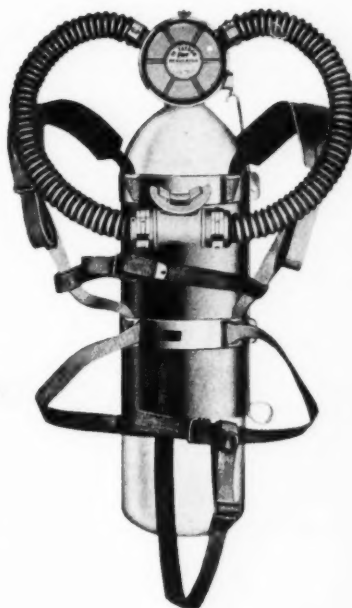
Non-return valves, in pearl  
gray hoses.

Smaller, more comfortable  
mouthpiece (but no decrease  
in air flow passages).

Improved, comfortable harness  
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pull out).

Safety Reserve (pre-set,  
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Safety Tank — ICC approved,  
drawn steel, galvanized, then  
double spray painted blue  
with white ends — colorful,  
visible, safe.



New York 11

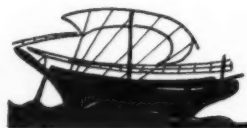
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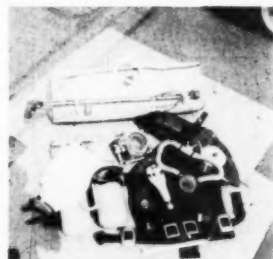
**SKIN DIVING IS OUR BUSINESS**



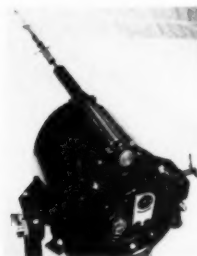
**MAKO WESTON MASTER III**—housing with control for operating exposure dial. Can be used with meter door open or closed. Housing \$29.95, meter and housing \$52.50, from—Underwater Sports, Inc., 2219 Biscayne Blvd., Miami, Fla.



**FARMER JOHNS**—Wet suit for women and men. Features over-the-shoulder design for greater warmth. Suits are made from 1/4", 3/16" and 1/2" thickness neoprene, heavy-duty nylon zipper. Prices start at \$38.50. Write for illustrated brochure to—Ski N' Dive, 14610 Lakewood Blvd., Bellflower, Calif.



**EVERYTHING CARRIED IN ONE TRIP**—That's what prompted a diver to manufacture this all-in-one Aqua-Tote bag. Everything in the picture (except the lung tanks) will fit into this 5 cu. ft. bag. Made of water resistant canvas with nylon stitching and corrosion resistant zipper. Plenty of room for all your diving gear plus beach equipment for the wife and kids. Price \$11.95 ppd., from—Aqua Accessories, 4367 W. Pico Blvd., Los Angeles 19, Calif.



**SAMPSON CAMERA WITH PROTECTION POWERHEAD**—Designed for the protection of the cameraman while diving in dangerous areas. Poke stick with .38 cal. powerhead is attached to camera, using gun mounts. Write for illustrated brochure on underwater movie cameras, underwater TV, spearguns, powerheads, etc. Sampson-Hall Company, 10561 Sunset Blvd., Los Angeles 24, Calif.

**SKIN DIVER**—September 1959



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## To Men Who Dive Deeper Than 20-ft. ... in Waters Colder than 55 Degrees!

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You stay comfortable in water temperatures from freezing upward. That's not all. With this suit there is no "cold shock" when you get in the water and no "evaporation chill" when you're out of water in the cold wind.

Chief Arthur Stanfield, UDT and World Famous Instructor, writes: "It's the only suit for diving at greater depths and in coldest water. Wearing Skooba-"totes" dry suit the diver can withstand much colder water for longer periods of time".



### LOOK! COMPARE!

No Other Suit Offers All These:

- **EASY TO PUT ON**—even without talc because it's made of special anti-grab pure gum rubber.
- **NO SEAMS** to rip . . . **NO LEAKS!**
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- **100% FACTORY GUARANTEED!**
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- **NOT A KIT!** A ready-made suit complete and ready to dive.
- **TAPERED WRISTS** and contoured face to provide water-tight seals—won't cut circulation.

Only two years ago, Skooba-"totes" introduced America's first suits made entirely without seams. And pure gum rubber. They were an immediate sensation. Here for the first time was a suit entirely factory made by precision machinery—and at unbelievable prices.

Today, Skooba-"totes" have been proved and proved again by thousands of divers. *Today Skooba-"totes" are bought by more divers than any other suit made.*

#### PROFESSIONAL SKOوبا-"totes"

Suit consists of Shirt, Hood, Long Pants with feet and Waist Ring and Rail. Feet are double-reinforced for your protection. Color: Blending Brown pure gum rubber.

#2020-K (with separate hood) . . . **NOW \$2995**  
#2120-K (hood & shirt in 1 pc.) . . . **\$2995**  
Waist Rail & Ring . . . \$5.25

#### At Most Skin Diver Supply Stores

or write So-Lo Marx Rubber Company, Loveland 325, Ohio, for free catalog and sample of the stretchy gum rubber used in making suits.

If your dealer is temporarily out-of-stock please don't blame him. The demand for SKOوبا-"totes" has been overwhelming. We're doing our best to get suits to him, and are now shipping hundreds of suits every week.



# SALT WATER AQUARIUMS

By JERRY FAWCETT

What started this series was a letter from one of our neighboring countries (Catalina Island) suggesting that the seasoned skin diver was overlooking a good bet, and a very interesting hobby, if he did not try his hand at bringing 'em back alive—the small fish and invertebrates—and keeping them at home in small aquariums. Fact is, some divers do just this, and belong to a society of others similarly interested, The California Marine Aquarists, which meets once a month in the Los Angeles area. Since it is not quite so easy as simply putting the fish and tank in the same room, here are a few suggestions.

## AN OCTOPUS IN THE LIVING ROOM

The hobby of keeping fish, of course, is very old and nowadays no self-respecting 10c store would be caught without a display of fish for sale to keep in goldfish globes or aquariums in the home. Many large shops are devoted exclusively to catering to the needs of the tropical fish hobbyist: aquariums, filters, aerators, nets and the like—and fishes—many thousands on display and in breeding and hold tanks.

The popularity of maintaining marine (salt water) fish and invertebrates in small aquariums is more recent; however a book on the subject written over a hundred years ago extols the joys of collecting your own specimens at the seashore and keeping them alive. All you had to do to aerate, according to instructions, was to swoosh the water (and specimens) back and forth from one container to another, or blow air into the dish through a pipette held between the lips. Simple. It said. In any event the skin and scuba diver has a much better opportunity to observe and collect interesting and colorful fish and invertebrates, and these articles will attempt to improve somewhat on the dish and pipette technique.

First need, of course, is an aquarium, jar, globe, bucket, pail or tub in which to keep the captives. Since much of the pleasure of having these pets is in watch-

ing their activities, only aquariums and the like will be considered here.

Sea water is extremely corrosive and it is necessary that only materials that are impervious to the chemical action of the water be allowed to come in contact with it. Ideally, the tank should be at least 15-20 gallons in capacity. These may be purchased at a pet shop or made by the hobbyist of a variety of materials, for instance marine plywood lined with a glass plastic and a viewing side of quarter inch or heavier plate glass, the thickness of the latter depending on the capacity of the tank. If a metal frame is used, several coats of asphaltum varnish may be used where the metal comes in contact with the water, thus preventing metallic pollution. Some stores sell aquariums made especially for use with sea water where there is no metal contact. Again, get or make as large a tank as reasonably possible, for while it is more trouble to obtain the greater amount of water, difficulties from the waste materials of the fishes, and uneaten food, are less likely to occur in the larger setups.

A vital piece of equipment is the filter system and here we strongly urge that a sub-sand filter be used. There are several good ones on the market. Only a few years ago it was the practice to keep the aquariums almost surgically clean—no sand, rocks and coral boiled before immersion, plastic tubing and filters scrubbed—and the fish died promptly and with enthusiasm. Now, a 3 or 4 inch layer of clean washed gravel is placed over the filter, a small compressor put to work a day or two before the fish are introduced to the tank—and what a difference. Sure, there are still fatalities, but nowhere near what they were formerly. Two societies in the U. S., and several abroad, are working hard to make the seawater hobby as foolproof as its fresh water counterpart.

The Octopus? Well, perhaps we can snare him in time for the next installment. ➤

## Letters

... In the June issue of "Skin Diver Magazine," in the article about the Portuguese man-of-war, the writer, Mr. Lane states that the float of the animal contains gases slightly different from those of the atmosphere "being relatively richer in carbon monoxide and poorer in oxygen." I understand that it was carbon dioxide and not monoxide that was given off by living animals, and that carbon monoxide is a product of internal combustion engines. If Mr. Lane is correct, how does the animal get or manufacture its carbon monoxide?

Jack Hricko  
Sec. Norwescan Divers  
Torrington, Conn.

... I am sympathetic with the confusion of Mr. Hricko, who professes to be concerned that carbon monoxide is a "product of internal combustion engines" and should, therefore, not be found in the float gases of *Physalia*.

The exact metabolic mechanism by which this unexpected phenomenon is brought about is not yet completely understood. However, the secretion of nitrogen, argon, helium and other inert gases into the swim bladders of both fresh water and marine fishes is a well-known phenomenon. There is even developing a certain agreement among investigators concerning the methods by which this secretion is accomplished. Perhaps it is not unduly optimistic to hope that similar progress may be made shortly in explaining the unexpected appearance of carbon monoxide—and this was not a typographical error—in the pneumatophore of *Physalia*.

Studies of this mechanism are currently under way in my laboratory and in that of Dr. Jonathan B. Wittenberg in the Albert Einstein College of Medicine.

Charles E. Lane  
Associate Professor, Marine Science  
The Marine Laboratory  
Miami, Florida

... I would like to thank, publicly, all the wonderful people who helped make my endurance dive a success on May 15th through May 17th, 1959, in Northridge, Calif. Except for their help and encouragement, I might not have made it. After all, 50 hours, 2 minutes and 43 seconds is a long time!

Herb Quintd, president of Quintd Pools in Northridge, was the instigator of this feat by offering to sponsor me in this endurance dive. He brought in the Chamber of Commerce, the police department, the fire department and other notables of the city of Northridge to be my official timekeepers. He also had Dr. Ivan Tiholiz and the Chapin Ambulance service standing by during the complete dive.

Bill Wright, of the Sunland Sports Lodge in Beverly Hills, made the arrangements for me to use the Waterlung regulator that was donated by Dick Kline and Sam Lecocq.

My safety men were representatives of three diving clubs... The Gulls & Buoy of North Hollywood, The Poseidons of Beverly Hills, and the Tereidos of Reseda. They were Noel Brooks, Don Eisenberg, Lucky Lahan, Bill Lewis, Joe Marshall, Miles McDorman, Jerry McLagan, Stan Perlman, Mike Ratner, Bob Watson and Gene Wilson.

I want to thank each one of these fellows personally and tell them that I think they're the greatest.

Alberta Jones  
Los Angeles, Calif.

(Continued on page 38)

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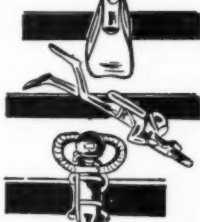
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Tie Bars  
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Why pay more for same jewelry?

## UNDERWATER SPOTLIGHT



Central brings you the famous type 40,000 candlepower lite used on the Andrea Doria; completely pressurized and guaranteed. NEW improved model...\$9.95

Extra Batteries — \$2.75  
2 for \$5.00

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Yellow — Red — Green — Black



Now with very little effort, you can custom build your own wet suit and save more than 50%. Central's most fabulous multi-fit pattern enables you to make a suit to fit your every exact measurement. Also included in the kit are 2 large bottles of glue, pre-cut seam material for entire suit, zippers and step by step instructions. NOW the only kit that offers you shirt, pants, hood, boots AND gloves. A fantastic 5280 square inches of the finest first quality 400% stretch Neoprene.

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Also available in professional 3/4" skin both sides  
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Specify color of Neoprene and Stripping.  
Choice of black, yellow, red, or green.

All Kits  
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NEW EXTRA HEAVY SERRATED BLADE.  
NOT LIGHTWEIGHT WAVY EDGE BLADE.

Central brings you the Knife for Skin Divers. After extensive tests we have mfrd. the knife that makes all other diving knives obsolete. Blade—6 1/2" long, saber ground stainless steel; High Carbon holds edge, will not rust; Serrated edge for sawing action; One piece blade & handle, hole on butt for cord. Handle—Heavy non-slip rubber; Moulded to blade; Bright color for easy visibility. Sheath—Lightweight plastic; Positive locking; Extra sturdy—fits up to 2" belt; Knife easily removed but cannot fall out; Overall length almost 12". Most professional divers work near the bottom, so we have not made this knife to float. Value \$9.95 SPECIAL at Central ONLY.....\$5.95

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ENOUGH FOR FULL SUIT

## NEO-FUSE GLUE

Central's world famous glue \$1.00  
in NATURAL, YELLOW, BLACK  
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## EXTRA HEAVY DUTY ZIPPERS — RUSTPROOF

6" - 55c 9" - 75c 28" - \$1.50

## SUMMER SHORTY SUIT

Deluxe 1/2" Neoprene T shirt, with reinforced folded cuff sleeves. New longer model, with zipper front and double snap catch, gives full short suit protection.

Was \$19.95

Central's Special.....\$12.95

2 Ply Dry T Shirt  
Original.....\$17.50

Central's Special.....\$6.95



## SKIN DIVER ASH TRAYS



Ceramic heat treated ash trays finely detailed replicas in yellow or white. Specify color. An ideal gift.

7 inch "Squalo" fin or 6 inch "Champion" Mask. \$1.95 ea.

Set of 2 Fins and 1 Mask \$5.00

## UNDERWATER CAMERA



Now you can photograph undersea life, with a minimum of expense. Famous make underwater camera, perfect for Black and White and Color. Use inexpensive roll film. Housing is camera.

Regular Model — \$14.95

Deluxe Model with Flash — \$29.95

## CAMERA CONTROLS

\$1.99

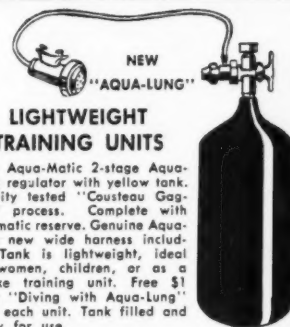
3 for \$5

Double-O ring 1/4" x 5"

Stainless Steel shaft. New precision lubricating gland. Worth \$5 ea.

## COMPASS DEPTH GAUGE

Liquid filled compass with Bourdon principle depth gauge. Extremely accurate, luminous, rugged, non-corrosive nickel plated brass case with heavy duty wristband. Easy to read increments. 100' Model .....\$12.95 250' Model .....\$12.95



## LIGHTWEIGHT TRAINING UNITS

New Aqua-Matic 2-stage Aqua-Lung regulator with yellow tank. Quality tested "Cousteau Gagnant" process. Complete with automatic reserve. Genuine Aqua-Lung new wide harness included. Tank is lightweight, ideal for women, children, or as a deluxe training unit. Free \$1 book "Diving with Aqua-Lung" with each unit. Tank filled and ready for use.

New 25 minute model complete.....\$44.50  
New 55 minute model complete.....\$64.50

## AQUAPHONE

Very clever sound powered underwater speaking device that can be placed in a mask or utilized with any regulator mouthpiece with the exception of the Northhill. Good for limited conversation or attracting attention. Excellent for safety minded divers. Easily installed. Now half price.

\$1.99



## ARBALETE SPECIALS



\$27.95 Deluxe as shown now.....\$19.95

\$19.95 Standard 2 elastic now.....\$14.95

\$17.50 Junior 2 elastic now.....\$12.95



AUTO EMBLEMS \$1.95

## TANKS FILLED



160-09 JAMAICA AVENUE  
JAMAICA 32, L. I., N. Y. - RE. 9-5772  
MINUTES FROM MANHATTAN



## UNDERWATER WATCH

Improved model of famous 100 fathom watch. Strongest stainless steel case ever made. Full 1 year guarantee. Improved Ultrasonic movement, ultra luminous dial and hands, unbreakable mainspring, waterproof band, rugged yet attractive. Guaranteed waterproof to 600 ft., shock protected; bayonet back. Natl. Adv. price \$65. Our price \$26.95 plus 10% fed. tax.



FAMOUS MAKE LIGHTMETER  
Now Central brings you the world famous Weston Exposure meter complete with extra heavy lucite case. Ideal for still or movie camera. Pressure tested to 150 ft. Needs no underwater adjustments. Housing complete with Weston Meter with nylon and neoprene neck strap at a 25% saving. Reg. \$39.95—Special.....\$29.95



# HOME CONSTRUCTION OF UW CASE

ONE of the many questions a skin diver may ask is: "How can I get my camera underwater cheaply?" The answer is make your own underwater housing. The next question heard is: "How?"

Any do-it-yourselfer with a basic knowledge of underwater camera case construction and a pinch of ingenuity no longer need be out of the picture-taking swim.

Underwater housings can be easily constructed of plastic, wood, or metal; each with its advantages and disadvantages.

## PLASTIC

The easiest of the plastic cases to make consists of a plastic food bag and a face mask. Find a plastic bag and check it for pin holes by filling it with water and squeezing it. If the bag has no leaks, insert the camera in the dry bag.

Take the clamping ring off a face mask and put the mask into the mouth of the bag. Squeeze out all excess air, then put the clamping ring back on the mask over the plastic bag.

The thin plastic makes it easy to operate the camera controls, but do not take it deeper than 15 feet or water pressure may break the bag on a sharp corner of the camera. Diagram A-1.

The next easiest plastic case to construct is from sheet plexiglass  $\frac{3}{8}$  to  $\frac{1}{2}$  inch thick. Construction starts with a full-scale drawing of the camera to be used. Next, design the smallest possible box to fit around it, but still leave room for controls, etc. Lay the parts out on paper to achieve the most use from the smallest piece of plastic.

Plexiglass can be worked with ordinary woodworking tools, but be sure all joints are square before attempting to glue them together. Get the glue from the same dealer who sold you the plexiglass; he will know what you need.

For real custom cases, a liquid plastic or fiberglass can be used in conjunction with a mold, but this involves a lot of extra time and work. Diagrams B-1, E-1,2,3, F-1,3, G-1,2,3,4,5, H-2,3,4.

## WOOD

Wooden cases are about the easiest to make, but sealing problems are greater

and not being able to see the whole camera when underwater are some of the disadvantages.

If using wood,  $\frac{1}{2}$  to  $\frac{3}{4}$  inch thick plywood is best, but check it for holes between layers of veneer. Use a good grade of waterproof paint, for both inside and outside of case. Diagrams C-1, D-1, E-1,2,3, F-1,3, G-1,2,3,4,5, H-2,4.

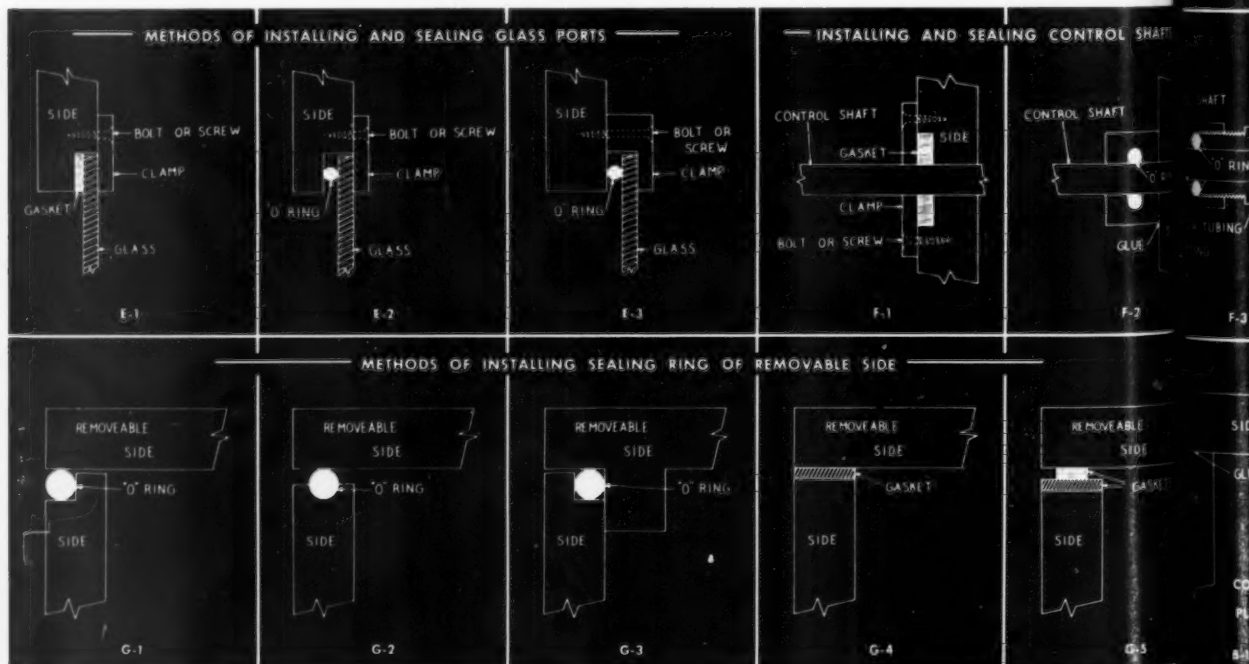
## METAL

Metal cases can be built from scratch or some container can be converted for this use. Corrosion is the biggest enemy of metal cases. Metal parts of all types of cases should be stainless steel or brass. A converted pressure cooker makes an excellent case for movie cameras. Diagrams E-1,2,3, F-1,3, G-1,2,3,4,5, H-1,2,3,4.

## GASKETS

One of the biggest problems confronting the builder of a case is: "How do I seal all the openings?" The answer is with rubber O rings and gaskets; once again the question arises: "How?"

Hydraulic O rings can be found in (Continued on page 39)





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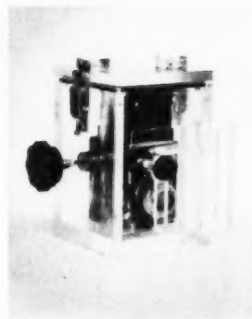
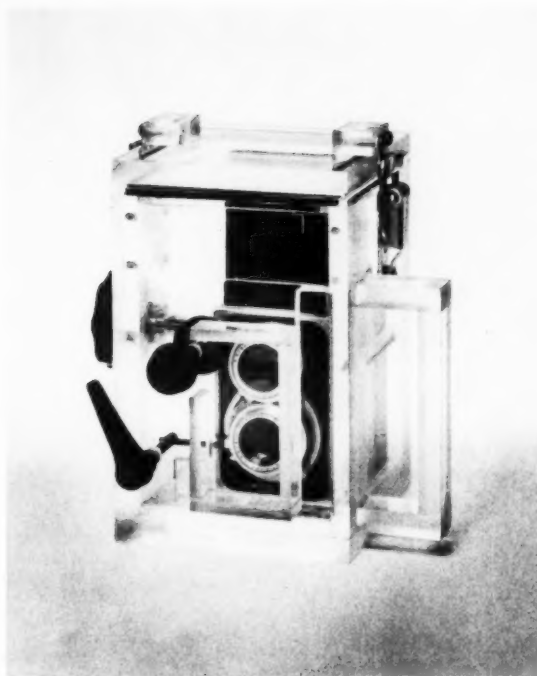
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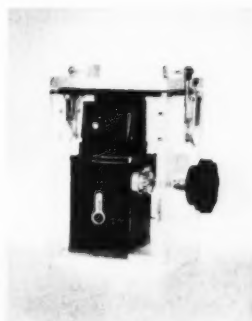
Q-5

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EASY TO MAKE  
WATERPROOF  
CASE

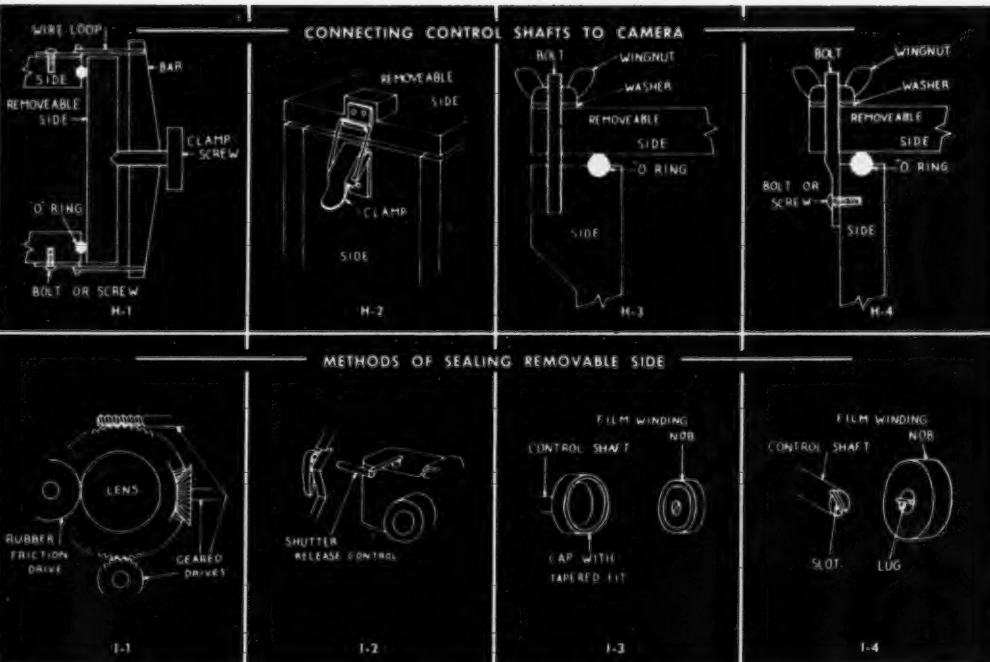


Underwater camera case built by author for the total price of \$8.50 and ten hours of labor using constructions of diagrams B-1, F-3, G-3, H-2, I-1,2,4.



By **NORMAN S. HUGHES**

**BROOKS INSTITUTE OF PHOTOGRAPHY**  
SANTA BARBARA, CALIFORNIA





Sand, sun, surf, a diver—and your camera handy can net you a striking silhouette such as this one captured by Edward L. Gulley off the Southern California Pacific coastline. The diver is Tom Phillips of the Fathomiers.

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SKIN

# HOW TO TAKE UW PHOTOS IN AREAS OF LIMITED VISIBILITY

It is assumed that the reader is an experienced skin diver. If not, the author strongly recommends that adequate training be taken. An underwater photographer is very likely to become absorbed in exposure or composition and not be aware of impending dangers. It is also assumed that the reader has had some experience with topside photography. The principles learned topside will prove most valuable as they will still apply underwater with some modification.

This article is not written with the intention of giving the reader a complete course in underwater photography—but is intended only to serve as a basis for adapting his skills and equipment for underwater use. It is written to serve as a guide in areas where visibility is from 15 to 50 feet.

## CAMERA

No group of cameras is so well adapted for underwater use as is the small compact 35mm camera. In spite of its small negative size the great number of advantages more than compensates for its few disadvantages. Its ability to take 36 pictures without reloading is a great asset. There are hundreds of excellent 35mm cameras which will work well underwater—I could not begin to list all of them. However, listed below are the desirable qualities which one should look for when purchasing a camera for underwater use:

1. Camera should have provision for interchanging lenses.
2. Shutter should be cocked automatically when film is advanced.
3. It should be synchronized for flash.
4. Lens should have a maximum opening of at least  $f/5.6$ .

## CAMERA LENSES

Any serious student of underwater photography should equip his camera with a wide-angle 35mm lens. This lens will enable the diver to work close to the subject, and still cover a large picture area—a tremendous asset in water where visibility is limited.

## CAMERA HOUSING

There are a great number of materials which can be used to construct underwater housings. Listed below are two of the most popular materials:

**Aluminum:** An excellent metal, its great strength, light weight and availability make it almost ideal. A good housing can be used down to a hundred feet without pressurizing. Aluminum

housings should be anodized or painted to reduce salt water deterioration, and a rinse in fresh water should always follow use in salt water.

**Plexiglas:** This material may be used very successfully by the diver desiring to build his own housing. However, material used should be at least  $\frac{3}{8}$  inch thick. These units must be considered shallow water housings, as it is quite dangerous to venture below 40 feet without pressurizing the unit. The ability to see the entire camera at all times is, of course, a big asset. However, the diver must exercise care not to scratch the Plexiglas in front of the lens.



## UNDERWATER LIGHT METER

Light meters are of definite value. However, their readings are not conclusive and must be used by the diver only as a basis for determining the correct exposure. There is no formula for adjusting the meter readings, as there are many variable factors such as time of day, underwater visibility, and the quantity of suspended matter in the water. It is suggested that the reader desiring to use a meter conduct exposure tests under varying conditions to acquire the experience necessary to properly interpret an underwater meter reading.

## UNDERWATER FLASH

It is definitely recommended that flash be used in areas where visibility is poor to fair (15 to 25 feet) and in deep dark areas. The flash will definitely act as a fill-in adding detail to your pictures. Numbers 5, 25, and 26 bulbs are well adapted to underwater work. I have used them successfully down to 75 feet, but one should wear a glove when handling them as they sometimes blow up when being removed from the flash arm after having been fired.

## FILM, EXPOSURE, PROCESSING

The following films with the exposure and processing indicated have proved to work quite well. It is recommended that the reader take his first pictures using the following data as a guide. After carefully examining your first roll of film you will then be able to adjust this data to your equipment and water conditions.

## BLACK-AND-WHITE

**Plus X, ASA 80, Available Light**  
Focus camera at 6 feet  
Set shutter speed at 1/50 second  
Set lens opening at  $f/8$   
Develop in D-76, diluted 1-1, at 68 F for 8 minutes

**Plus X, Flash**  
Focus camera at 6 feet—use number 5, 25 or FP 26 bulb  
Set shutter speed at 1/50 second  
Set lens opening at  $f/8$   
Develop in D-76, diluted 1-1, at 68 F for 8 minutes.

## COLOR

**Super Anscochrome, ASA 100, Available Light**  
Focus camera at 6 feet  
Set shutter speed at 1/50 second  
Set lens opening at  $f/11$

**Super Anscochrome, Flash**  
Focus camera at 6 feet  
Use a number 5B, 25B, FP26B  
Set lens opening at  $f/8$   
Set shutter speed at 1/50 second.

**Kodak High Speed Ektachrome Film, ASA 160, Available Light**  
Focus camera at 6 feet  
Set shutter speed at 1/100  
Set lens opening at  $f/11$ .

**Kodak High Speed Ektachrome Film, Flash**  
Focus camera at 6 feet  
Use a number 5B, 25B, FP26B  
Set shutter speed at 1/50  
Set lens opening at  $f/11$ .

The above data encompasses the results of many tests conducted by John Stewart, Jr. and Colon K. Sherrill. Tests were made with Leica cameras equipped with 35mm wide-angle lenses in areas where visibility was 15 to 40 feet.

## MISCELLANEOUS TIPS

1. Keep camera housing out of sun.
2. Place a small package of silicagel in housing to reduce fogging.
3. Use fresh dated film only and process it as quickly as possible after exposure.
4. Keep control glands and O rings lubricated with silicone lubricant.
5. Select one black-and-white and one color film and stick with it until you understand all of its qualities.
6. Process your own film or have a dealer custom process it.
7. Use only brand name flash bulbs.
8. Always carry an extra battery for your flash.
9. Carry a flash test light bulb so that you can test flash before going down.
10. Buy and carry a K-1 yellow filter; this filter will in many cases improve contrast—no factor is necessary.

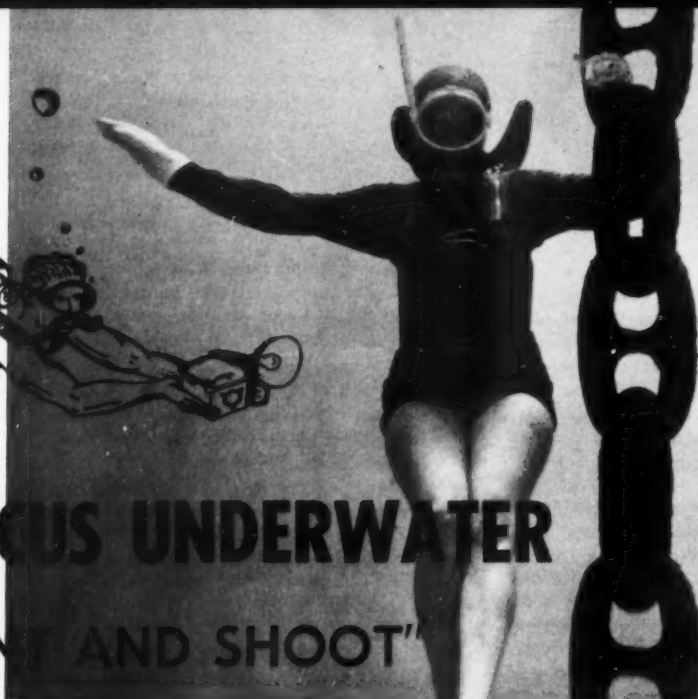
## PRINTING BLACK-AND-WHITE NEGATIVES

Best results are obtained with a double condenser enlarger as it will tend to increase contrast and produce a sharper print.

Try Kodabromide F-5 enlarging paper. It gives excellent results.

An excellent cold tone paper developer is Dupont's D-53. Diluted 1-1, this developer does an effective job when used with Kodabromide paper.





Jean Kavan poses for her band Pet on Wake Island. Fixed focus camera might be limited in some respects but the other hand truly universal.

# FIXED FOCUS UNDERWATER

## "POINT AND SHOOT"

By E.E. "Bud" Petersen

IT IS INTERESTING to note the great strides made in perfecting the modern day camera of the adjustable type. The majority are truly marvels of precision, with their specially formulated compounded lens elements and shutter mechanisms, which are masterpieces of mechanical ingenuity. These features combine to provide the ultimate in the photographic art, when understood and operated by one skilled in their use.

Of equal interest are the simple meniscus lens cameras with their fixed focus, non-adjustable apertures and preset shutters, requiring no skill other than to aim, click the shutter and wind the film. As well as being the oldest form of camera, it also holds the distinction of having the greatest universal mass appeal because of its simplicity. Further, these simple cameras enjoy a higher volume of sales than all other types cameras combined.

With this kind of popularity among the "landlubbers," it was by no mere coincidence that it found its way to that ever expanding segment of the sports population we know as the skin diver.

The fixed focus meniscus lens camera has definitely assumed its position and is here to stay among divers whose interest is in the wonders of underwater photography. This is evidenced by the ever increasing popularity and larger sales volume from year to year, by those

of us involved in the manufacture of this type camera.

When one takes a critical account of the merits of the meniscus type of camera, it should be emphasized that in competition many prize-winning pictures have been made with this equipment.

Great progress in the film manufacturing techniques has widened the scope of these cameras for use under conditions encountered in underwater photography. Today we have a variety of films to choose from, exhibiting greater speed and exposure latitude in both black-and-white and color. When we further consider the availability of flash attachments to supplement the available light, it becomes evident that these simple cameras are entirely practical.

The employment of flash, with these or any other type of unit, is highly recommended regardless of the "topside" lighting conditions. Flash lighting tends to fill in the areas of the subject which otherwise might be obscured by shadows. This is commonly referred to as highlighting the subject and results in better picture detail and contrast.



The "Aqua-Cam" fixed focus meniscus lens camera with flash.

The photograph shown of Jean Kavanui (#1) was taken with an Aqua-Cam Flash Camera, using a #5 flash bulb on Verichrome Pan Film at a depth of approximately 60 feet. This picture demonstrates the fill-in or highlighting provided by the flash. Without flash, the details of the face and shells might be obscured in shadows with the direct overhead sun lighting. In addition, the use of flash helps to increase picture contrast which is lost, to some extent, when shooting in a water medium.

It is a matter of record that the faster speed films tend to provide somewhat less contrast than the slower "Verichrome" and "All-Weather" types. The contrast can be improved, however, by experimentally increasing the development time over the time normally recommended for the specific film. Many photographic dealers are happy to accommodate in this special processing at a minimum of cost.

The picture possibilities with the meniscus lens cameras are not confined to just snapshots for the family album. The negative can be printed on film to provide the positive transparency necessary for projection. With the Aqua-Cam  $2\frac{1}{4} \times 3\frac{1}{4}$ " size transparency it is only necessary to trim the size to  $2\frac{1}{4} \times 2\frac{1}{4}$ " to fit the projection mount. Other cameras taking smaller pictures can use the 35mm mounts. In addition to black-and-white, color films are also available, and can be projected or printed and enlarged as the occasion demands.

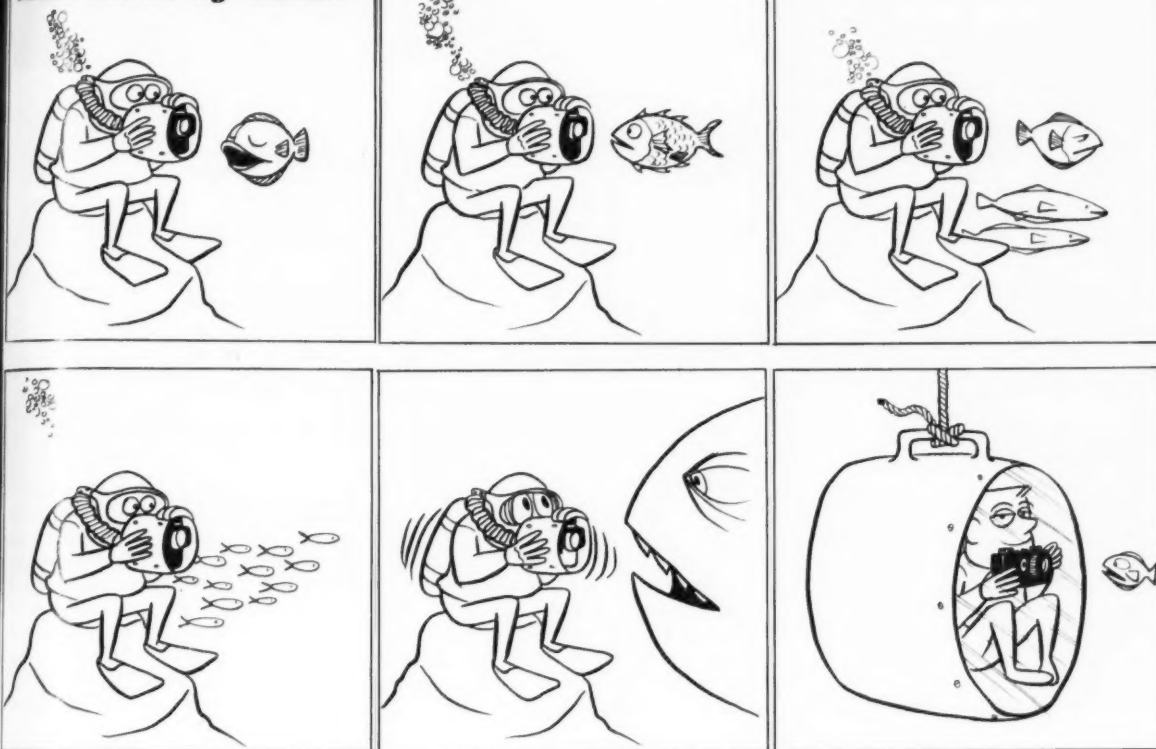
It is interesting to note how many commercial diving and salvage firms



purchase work. obvious observations estimate we rep thousands



# McSPLASH by Kohler



purchase our camera for use in their work. The pictures taken on the job obviously help to supplement the diver's observations, when the roundtable discussions take place, regarding proper estimates of time and costs. Again, may we repeat, that "a picture speaks a thousand words."

At the risk of seeming overenthusiastic about the use of the fixed focus meniscus lens types of cameras for underwater photography, we think we speak the minds of those in the manufacture of this equipment. We are especially interested in producing a camera with simplicity of underwater op-

eration as the keynote. Generally, the diver when underwater has "this and that" to think of in the maintenance and adjustment of his gear, in the interests of pleasure and safety. The addition of an "easy to operate" camera presents few problems to the diving operation, other than to aim, shoot and wind the film for the next picture. With no calculations to be made for focusing, f-stop openings and shutter speed settings, the chances of missing a picture, which must be taken quickly to preserve the action, is greatly minimized.

The ruggedness of the mechanical shutters and the absence of delicate adjustments make these cameras ideally suited to all phases of water sports photography. In addition to underwater photography, they lend themselves admirably to picture taking on boating trips, beach parties and swimming pools, where an unprotected camera might be ruined because of moisture.

In conclusion, it has not been our intention to provide a complete technical discussion on underwater photography, or to argue the pros and cons of the many fine cameras on the market. However, little has been written to enlighten the diver on the merits of the simple equipment, and this has been our aim. With this in mind, we leave the arguments, if any, to those of you who are professionals in the art of underwater photography.



## BUILD YOUR OWN

# UNDERWATER CAMERA CASE

Want to try the sensational new hobby—underwater photography? Well, build yourself a camera case from these instructions, get out your mask and flippers, and you're in business—literally, too, because good underwater pictures are just about the hottest selling item in the photography for publication field right now.

My initial attempt at building a case went along fine at first. The plastic was fairly easy to cement together and the removable backplate sealed tightly over a rubber gasket with only a slight tightening of the wing nuts. It wasn't until I attempted to install the various external camera controls that the project bogged down. Solving problems concerned with making the controls functional as well as watertight cost me many hours of sleep and several false starts. Now, however, the availability of a Dive-Rite "package control" consisting of acrylic plastic gland, neoprene O ring and  $\frac{1}{4}$ " stainless steel shaft, has greatly simplified the construction of custom camera cases.

Acrylic plastic is the ideal material for the case. Known by the trade names of Lucite and Plexiglas, it's available in sheets, rods, and tubing in many stock sizes. Acrylic is easily worked, has excellent optical and physical properties, is unaffected by salt water, and is light in weight. You can see all the camera settings and a light meter can be placed inside in almost any convenient position, and of prime importance, water leaking in can be quickly spotted.

Next major item is the shape of the case. A cylinder is the simplest to assemble and ideal for resisting external water pressure. One end of the cylinder

is closed by cementing on a disc of plastic—the other end is sealed with a removable disc made watertight by a rubber gasket. The camera lens must "see" through one of these flat discs and not through the curved wall of the cylinder or distortion will result. Cylindrical Acrylic is available in many stock sizes.

As for the camera, whether it's still or movie, a wide-angle lens is strongly recommended. 35mm size is ideal for still pictures because of lens interchangeability and the greater number of exposures on a roll of film. For movies, whether you use 8mm or 16mm depends on their purpose. The 16mm camera will produce movies of commercially acceptable quality, such as for TV showing. On the other hand 8mm will give fine results for home showing, and you can shoot 3 times as much film for the same price.

### Materials

Determine the minimum inside tubing diameter required for your camera with the lens facing one end of the cylinder, and buy a piece of tubing about 2" longer than the distance from lens to back of camera.

For compactness, the cylinder may be squeezed to an elliptical shape as with the Leica case shown. Acrylic is easily shaped by first heating in an oven to a temperature of 280 to 300 degrees, then securing to a form until cool.

A  $\frac{3}{8}$ " sheet plastic is adequate for the ends, or  $\frac{1}{2}$ " may be used if extra strength is desired. All sheet acrylic comes with a protective paper masking over both surfaces and this should be left on until fabrication is complete, ex-

cept, of course, where it is in the way of cemented joints. When cementing you must be careful not to let any of the solvent touch the masking or it will seep under the paper and ruin the glass smooth finish. Determine how much sheet material will be required and buy about 25% extra to take care of spoilage and waste. While buying the plastic get a bottle of cement and an eye dropper, or better yet, a hypodermic syringe for neater joints.

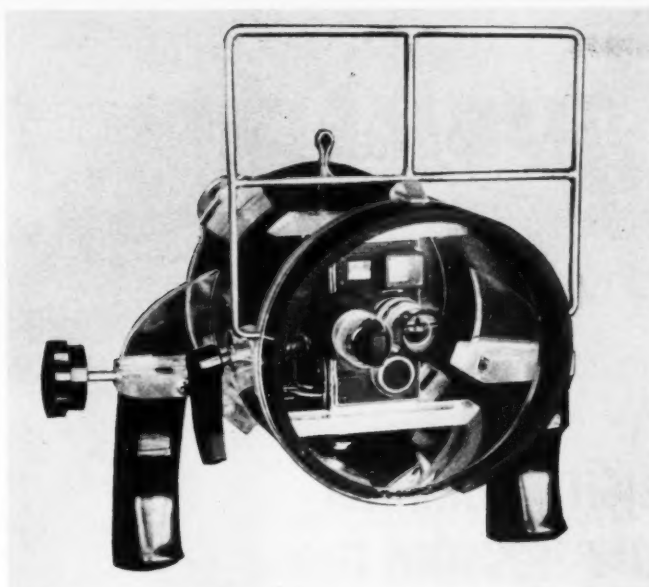
### Front Plate

Before cementing on the front plate, true up one end of the cylinder. Of course, if you have access to machine shop equipment, a machined edge is preferred. The following method, however, will do: Wrap a smooth piece of stiff paper around the cylinder, after making sure one edge of the paper is perfectly straight, and mark along this edge with a china marking pencil. Saw as close to the line as possible, then put a full sheet of coarse sandpaper on a flat surface and slide the end of the cylinder back and forth over the sandpaper using a slight rotary motion until saw marks have gone; finish with a fine grade of sandpaper.

Cut out the disc for the front plate on a band saw, smooth up the edge and trim away the masking paper about  $\frac{1}{4}$ " in from the edge all around one surface. Soak the end of the cylinder in cement for a few minutes. Apply cement to the disc where it will join the cylinder, to soften the surface, then quickly place the cylinder in position. Go around the joint with the eye dropper, or syringe, adding cement to completely fill in all air pockets, then place about 20 lbs. of weight evenly distributed atop

BY MART TOGGWEILER

Handles aid in getting steady pictures on this cylindrical 8mm Bolex case. Sport finder permits diver to see action full size.



the cylinder and allow to dry several hours. Avoid excess pressure as this can cause locked up stresses and distortion in the area of the point. CAUTION! Leave backing paper on both sides of front plate in way of lens plus adhesive tape over the paper to avoid scratching the optically clear surface during construction.

#### Back Plate

The next major step is fitting the backplate. Cut strips of  $\frac{1}{2}$ " by 1" plastic to contain the studs, and after heating in the oven, clamp to outside of cylinder until cool. Then cut to length and cement in position around outside edge of cylinder. Provide for 4 to 6 studs, this having been found to be ample for a tight seal, yet not too many wing nuts to fool with to get at the camera. Carefully lay out the back-

plate, providing "lobes" in way of studs.

Clamp backplate in position on cylinder and use tap size drill to go through backplate to the desired depth in the stud retaining strips. Carefully tap out for studs and ream holes in back plate to  $9/32$ " (for  $1/4$ " studs). Before installing studs, the gasket bearing edge of the cylinder must be true and reasonably smooth. Again a machined job is very nice. The photo shows how this job can be done in a drill press. A flat rubber gasket may be used for the backplate but a neoprene O ring is better and will last indefinitely. For a  $1/4$ " O ring the Parker part No. is AN 6227B-60. If a  $1/8$ " ring is preferred a softer rubber should be used and the number is AN-934-170. (For 6" OD tubing.)

Now you are ready to install the

studs and test for tightness. Use brass washers under the wing nuts and tighten moderately tight by hand. Weight the case and lower with string into 20 or 30 feet of water for a real pressure test. These tests during the progress of the work make it easier to locate and correct any leaks.

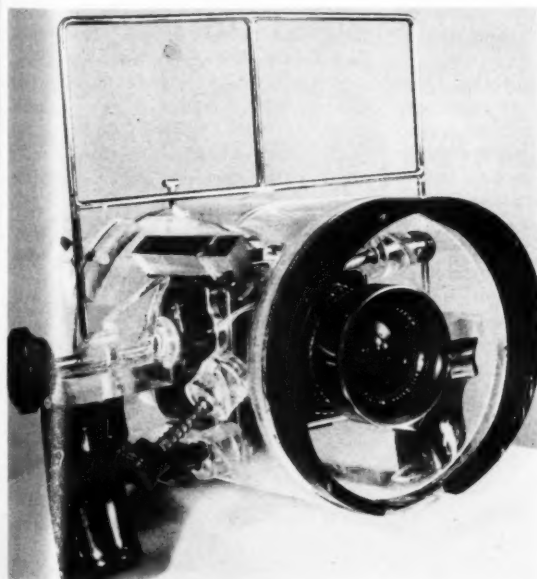
#### Lens Controls

Assuming that all is well so far, the case is now ready to receive the camera. The lens controls come first, and here you will have to more or less do the engineering yourself, using the photos for guidance and taking the following things into consideration:

1. Use gears if possible. Friction wheels will work but a gear drive is better.
2. A thin gear and a wide gear or two wide gears will remain in mesh even though shaft may slide in and out slightly. Never attempt to mesh two thin plate type gears. Remember, the lens moves in and out too when focused.
3. Locate controls for maximum convenience—be sure lens settings can be read without awkward maneuvering.
4. When installing gears on lenses don't make them too tight or lens ring will bind. Do not apply heat close to lens.

After due consideration of these suggestions, locate the centers of the control shafts and drill  $9/32$ " holes through the front plate. Assemble shaft, gear and gland and, holding camera in place, check for smooth operation. Any off-center error can be corrected by reaming the front plate holes to  $5/16$ " if necessary. Cement the glands in place, and when dry install gears and shafts again. Place the camera in exact position and mark its outline on inside of

(Continued on page 36)



Lucite case accepting the Hasselblad super wide camera represents perhaps the ultimate in underwater still equipment.

# SUBMERGED 16 & 35 mm

## LIGHT, COMPACT UW HOUSING FOR MOVIE MAKING

**L**ONG before many of today's skin divers were a gleam in their father's eye, Actor Jon Hall was diving for his dinner in the Pacific.

Hall, who is proud of his part Polynesian ancestry, learned diving in Tahiti, where he spent part of his boyhood, some 35 years ago. Since then he estimates nearly a year of his life has been spent under the water, much of it either behind or in front of a camera.

All of this has given him some very definite ideas on underwater photography—and he's done something about it. You see, in addition to Jon's acting and water talents, he's an accomplished technician, engineer, salesman and has even recorded a couple of music albums.

But now, about this underwater photography. He gets pretty livid when he starts to talk about the state it's in—especially the 35mm kind.

The way he describes it, the number of men needed with current professional underwater productions brings to mind the old joke heard during the depression, describing the WPA lawn beautifying project: "Two coming, two going, two snoring, two mowing." (All right, say it your own way.)

Trouble is, when you send a man down with a camera you have to have at least two other divers just holding onto him. And furthermore, sneers the



actor, you might as well use a submarine because the cameras being used are almost that big.

To further complicate things, says Hall, the power supply to turn the camera has to come from a monster-type generator outside or else hand winding is used. And then the exposure meter, he says, is usually floating around in another piece of apparatus.

Changing f-stops to admit more or less light is not easy either, complains Jon, what with the cameraman usually darting around to the front of the camera to check his exposure meter, and swinging to the back of the camera to begin shooting. Usually, too, a tripod is

essential to preserve stability, and even then cameras have floated out of reach into the depths or bobbed to the surface like apples. Another fundamental trouble, comparable to the unjustly maligned WPA workers, is the fact that loading and unloading most underwater cameras takes horribly long—about one hour.

All very bad, says Hall, turning to his Super Salesman routine. So what does his new camera housing, developed in conjunction with Herb Sampson, do? Here's Jon's pitch: The new camera shell is absolutely buoyant, let it loose and it will stay right with you. No necessity to hold onto it. If negative buoyancy is needed, provision has been made for adding lead weights on the bottom; for positive, just blow a slight amount of air into it. For deep, deep work, there is an attachment for a lung tank.

This neutrality makes it possible to get rid of the hangers-on, says the sun-

By

NIESON HIMMEL



tanned actor. No need for tripods at any time, claims Hall, with the neutral buoyancy and the hand holds provided the camera can be held perfectly steady.

The electric power source is right inside the camera in the form of tiny silver cells which are capable of long operation and need little recharging. This eliminates outside power sources, hand cranking or short-lived batteries.

Hall has developed a 400-ft. magazine for the underwater camera. Standard and largest size heretofore has been 100 feet, thus the amount of shooting time between reloads has been quadrupled, but that isn't all the new magazine makes possible:

Unloading and reloading time has been drastically cut from the hour previously needed to 3½ to 5 minutes. Since shooting time is precious, underwater film is best when shot between 10:30 a.m. and 3 p.m., when the sun hits the water just right—the short unloading and reloading times present an obvious advantage, says Jon. "In filming a recent South Seas series, I changed over to the new camera during the

Underwater fight scene from Jon Hall's forthcoming TV series "Malalo of the Seven Seas."



middle of the shooting," says Hall, "and did work in three weeks which before would have taken three months."

The Do-It-Yourself boys should love this one, says Jon. He claims that even the rankest amateur can shoot good pictures with the new camera, mainly because of a printed indicator on the glass back of the housing. The indicator directly translates the reading from the exposure meter into the proper f stop. Since the exposure meter is built in, all the picture-taker has to do is look at the meter dial, which is also on the inside back of the camera. The light cell itself, however, is on the front, right above the lens, so that it will correctly interpret what light is cast directly on the cell and the information is then piped to the meter dial on the back part.

Setting the dial is simplicity itself, says Jon. The f-stop control is on the pistol grip hand hold itself and can be controlled by the index finger alone. Thus, the f-stop changes can be made while shooting rather than starting and stopping. The internal finder gives a truer reading, say the makers, since it almost touches the lens, then through a mirror setup the image is carried to the back of the camera.

The makeup of the new photographic apparatus is also radically new, claims Hall. Only six lug bolts, easily removed or tightened, fasten the front part of the camera and, say the manufacturers, they form a perfect seal together with a rubber O ring inside. For topside use, the rear part of the camera can easily be removed, and the removal of one additional bolt frees the entire camera from its rear mount.

The sports finder top gives almost as true a picture as the internal finder, claims Hall. In addition, it is so fixed that it can be replaced by a CO<sub>2</sub> gun. Thus, it's possible to take a "hunting shot" of a spear leaving the gun and hitting the quarry.

Internally, the front portion of the

housing is made of ribbed anodized steel, which Hall claims it is virtually impossible to scratch. The aluminum is heat treated to resist external pressures, and the housing itself is treated to withstand salt water corrosion.

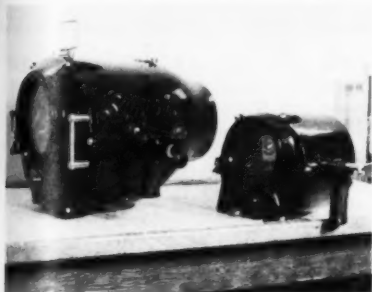
While the 35mm job is Hall's pride and joy, the firm also makes a 16mm housing virtually identical in features except that it is hand wound. The 16 is calibrated for the Elgeet 13mm wide-angle 1.5 lens while the 35 is set for the 18.5 Angenoux. The 16 opens up to f1.2, while the 35 goes from f1.6 to f2.2.

Jon is convinced a skin diver can get his cost back by shooting an underwater film series of some type and selling it to television or for use in lecturing. Sampson and Hall have formed an equal partnership. The new camera represents much of Hall's design work, and is called the Sampson-Hall, the firm name. The two men met some 15 years ago during the filming of one of Jon's pictures—"South of Pago Pago." Sampson helped with the technical details involved in the shooting of the underwater scenes for this film.

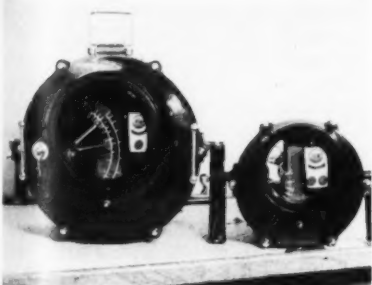
All of which brings up the other side of Jon's career. Get a mental picture of the actor and you see him behind the wheel of a schooner sailing into a South Pacific sunset or racing some Polynesian chick through the surf.

Well, he comes by his water skill naturally. He learned to dive in Tahiti under instruction from the natives. They didn't have swim fins in those days, only goggles and crude sling guns. But, as Jon explains, "we ate." Since then he has dived throughout the world during his colorful career. To name a few spots, the Red Sea, Florida, Tahiti and the Hawaiian Islands. He has one ambition, though—to dive on Australia's Great Barrier Reef.

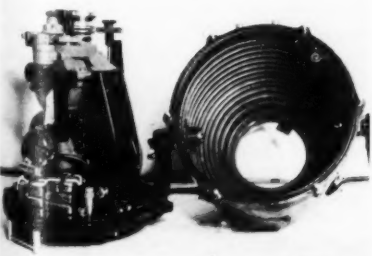
Although he does very well indeed, his other ambition is to skin dive the way the Tahitians do—4½ to 6 minutes under the water on one breath.



35 mm and 16 mm Sampson-Hall underwater housings.



Back plate showing camera controls.



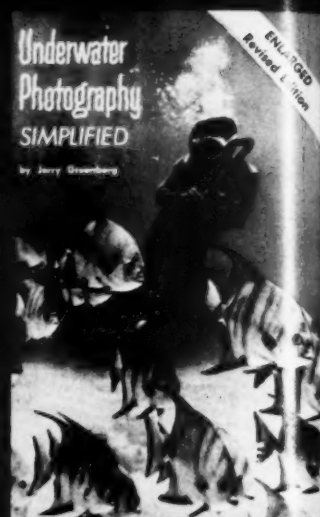
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# SHOOTING YOUR FIRST DAY'S PICTURES

By JERRY GREENBERG

(Chapter Three of "Underwater Photography Simplified".)

Underwater Bookshelf Book No. 32.



THERE'S no magic in taking good underwater pictures. If you can take a reasonably decent topside photo, you can also shoot good underwater pictures. Actually, there is no sure-fire formula to insure successful underwater photography other than obeying the basic rules of surface photography. Using this as your springboard, you can have the rewarding satisfaction of seeing the quality of your photos improve as you practice and experiment with your underwater unit.

Let's suppose that you're taking your housing underwater for the first time. Probably one of the first questions to settle is whether you should shoot with black and white or color film. Naturally, color film is tempting, but if you're going to experiment you'll find that it's less expensive to make your mistakes on black and white. After you've mastered the basic technique using black and white film, you can then switch over to color.

If you choose black and white film, you then have to decide whether to use Plus X or Tri X film. Most experienced underwater photographers will tell you that Plus X is probably the best all-around film. Tri X is more sensitive and as a result is more effective when you're working in deep water with poor lighting conditions.

With a roll of film in your camera your next move will be to pre-set your shutter speed and aperture opening. First, take a glance at the sky to check the intensity of the sun, and then take

a rough guess of the depth of the water that you'll be working in. Then, knowing the intensity of the sun and the depth of the water, check the black and white exposure chart on page 20, and pre-set your aperture opening and shutter speed accordingly. For example, if you're shooting under what you think is a bright sun and in a depth of 30 feet of water, your setting will be 200th at f/7. If it's hazy-bright, your setting will be 100th at f/7, and under a dull sun, you'll pre-set at 50th at f/7.

Pre-focusing is your next step. If you have a focusing control accessory on your unit this step isn't necessary. But if you require pre-focusing, and still going along with the thought that you're taking your first underwater picture, you should set your focus from 10 to 15 feet. This setting is best for most of the pictures that you'll probably shoot. After you get the feel of underwater photography you then can start experimenting with closeups and ultra-closeups.

Once you have pre-set your shutter speed, aperture opening and focusing, and have put your camera into the housing, you're all set to test your case to see if it's watertight. This only takes a few seconds and gives you the assurance that you're working with a well-sealed case. First, pump a few pounds of air into the housing through the pressure valve. Only two or three strokes are necessary for this test. Don't use the air pump at your local gas station or a line off a compressed air bottle.

Using anything but a hand pump makes it difficult to control the volume of air going into your unit, and may damage it. Next, put the case underwater for about 30 seconds to check it for any possible leaks. If there is any dirt or grit on the back-lid gasket that may cause an imperfect seal, you'll spot it by the air bubbles coming from that particular area. Once you're satisfied that your housing is completely watertight, you're ready to take it underwater for your first picture.

When you glide underwater you'll find an entirely different world beneath the waves. Whether in a river, lake or ocean, the subdued silence and abundant color underwater will always hold a strange fascination for the photographer. You'll also be surprised by the amount of sunlight that actually enters the water. Sunlight manages to penetrate to great depths, particularly in clear tropical waters. But despite the presence of this substantial sunlight it is important to bear in mind that there is less light to work with underwater than there is on the surface. Some loss of light takes place when the rays of the sun are reflected off the surface of the water. For instance, choppy water on a windy day will deflect more sunlight than would still water on a calm day. But the majority of the sunlight is not lost by reflection above water, but rather by scattering and absorption underwater. Scattering takes place when a ray of light strikes a particle underwater and bounces off in many uneven directions. Absorption results from a

Depth	
10 ft.	1
20 ft.	1
40 ft.	1
60 ft.	1
80 ft.	1
100 ft.	1

Above black	
taken in the	
marine photo	
hours of	
Underwater	
70 to 80	
development	
conditions	
springboard	

Depth	
10 ft.	1
20 ft.	1
40 ft.	1
60 ft.	1
80 ft.	1
100 ft.	1

Above black	
Streamline	
The subject	
hours of	
development	
80 feet of	
son at	

Yellow (Absorbs Blue)	
CC-05Y	
CC-10Y	
CC-20Y	
CC-30Y	
CC-40Y	
CC-50Y	

Red (Absorbs Blue and Green)	
CC-05R	
CC-10R	
CC-20R	
CC-30R	
CC-40R	
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# BLACK AND WHITE FILM EXPOSURE CHART

Depth	Bright Sun	Hazy-Bright Sun	Dull Sun
10 ft.	1/200 at 8	1/100 at 8	1/50 at 8
30 ft.	1/200 at 7	1/100 at 7	1/50 at 7
60 ft.	1/200 at 6.3	1/100 at 6.3	1/50 at 6.3
80 ft.	1/200 at 5.6	1/100 at 5.6	1/50 at 5.6
90 ft.	1/200 at 5	1/100 at 5	1/50 at 5
100 ft.	1/200 at 4.5	1/100 at 4.5	1/50 at 4.5

Above black and white film exposure chart shows results of tests taken in the Gulf Stream flowing in sub-tropical waters under ideal marine conditions. The suggested exposures were shot between the hours of 10 a.m. and 2 p.m. with light to variable surface winds. Underwater visibility in the Gulf Stream during the tests was about 70 to 80 feet. Film used for the tests was Plus X rated at A.S.A. 100 developed in Microdol or Finex L for 15 minutes at 68 degrees, if conditions are different in your area, use the above information as a springboard and adjust them accordingly to meet your local needs.

# COLOR FILM EXPOSURE CHART

Depth	Kodachrome ASA 10	Anscochrome or Ektachrome ASA 32	Super Anscochrome ASA 100
10 ft.	1/50 at f/4.5	1/100 at f/5	1/200 at f/7
30 ft.	1/50 at f/4	1/100 at f/4.5	1/200 at f/6.3
60 ft.	1/50 at f/3.5	1/100 at f/4	1/200 at f/5.6
80 ft.	1/25 at f/4	1/100 at f/3.2	1/100 at f/6.3
90 ft.	1/25 at f/3.5	1/100 at f/2.8	1/100 at f/5.6
100 ft.	1/25 at f/2.8	1/50 at f/2.2	1/100 at f/4.5

Above color film exposure chart shows results of tests taken in the Gulf Stream flowing in sub-tropical waters under ideal marine conditions. The suggested exposures were shot with a bright sun between the hours of 10 a.m. and 2 p.m. with light to variable surface winds. Underwater visibility in the Gulf Stream during the tests was about 70 to 80 feet. Conditions are different in your area, use the above information as a springboard and adjust them to meet your own local needs.

# COLOR CORRECTION FILTER CHART

Yellow (Absorbs Blue)	Exposure Increase In Stops	Magenta (Absorbs Green)	Exposure Increase In Stops	Cyan (Absorbs Red)	Exposure Increase In Stops
CC-05Y		CC-05M	1/3	CC-05C	1/3
CC-10Y	1/3	CC-10M	1/3	CC-10C	1/3
CC-20Y	1/3	CC-20M	1/3	CC-20C	1/3
CC-30Y	1/3	CC-30M	2/3	CC-30C	2/3
CC-40Y	1/3	CC-40M	2/3	CC-40C	2/3
CC-50Y	2/3	CC-50M	2/3	CC-50C	1
Red (Absorbs Blue and Green)	Exposure Increase In Stops	Green (Absorbs Blue and Red)	Exposure Increase In Stops	Blue (Absorbs Red and Green)	Exposure Increase In Stops
CC-05R	1/3	CC-05G	1/3	CC-05B	1/3
CC-10R	1/3	CC-10G	1/3	CC-10B	1/3
CC-20R	1/3	CC-20G	1/3	CC-20B	2/3
CC-30R	2/3	CC-30G	2/3	CC-30B	2/3
CC-40R	2/3	CC-40G	2/3	CC-40B	1
CC-50R	1	CC-50G	1	CC-50B	1 1/3

Exposure and Filter guides from Jerry Greenberg's "Underwater Photography Simplified"

ray of light falling upon a comparatively soft particle which in turn absorbs or soaks up the light and puts an end to its penetration underwater.

Lighting conditions will naturally vary according to the body of water in which you shoot. But regardless of the water you choose to shoot in, you must realize that you lose light as soon as you take your camera underwater. And even if you have less light to work with it is important to remember this rule: if you can see your subject, you can photograph it provided you give your film the proper exposure.

If while swimming underwater you notice that all the fish look larger don't be alarmed. The fish's exaggerated size is an optical illusion caused by magnification. This is the result of refraction of light underwater that magnifies all objects and makes them appear about 25 percent larger. Many underwater photographers make the mistake of trying to compensate for this magnification, but don't let it fool you. The important thing to remember is not to compensate for magnification, and instead focus at the distance that the object

appears. For example, if you judge a fish to be 10 feet away, you should focus at 10 feet. The lens of the camera will record the same degree of magnification as your eyes see.

Most likely one of your first subjects will be a curious fish. As soon as one comes within range, bring your camera case up to your eye and press it against your face mask to steady it. Then when you've composed the fish properly, hold your breath and squeeze off the shutter very slowly. When you hear the reassuring click of the shutter you'll know that you've taken your first underwater shot.

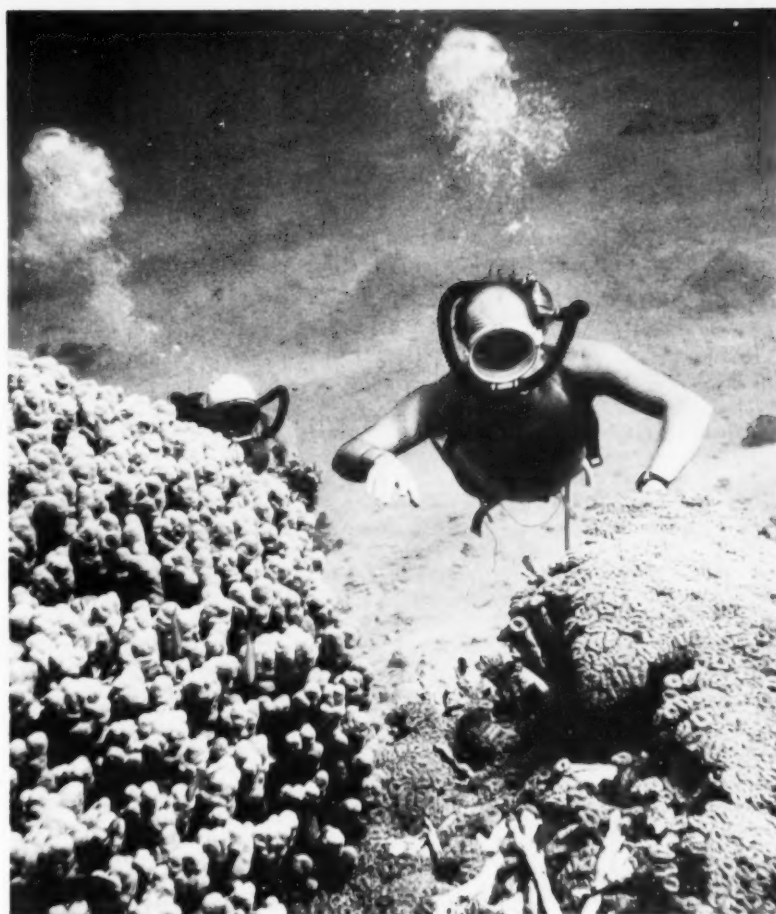
If you have any trouble steadying yourself while composing a picture underwater you can overcome this by using the proper amount of lead weights around your waist to give you stability while shooting. Also, to be prepared to shoot under all circumstances, learn to compose pictures lying down and standing up. For a change of pace try shooting vertical as well as horizontal pictures.

It's a good idea during your first day's shooting to keep a written record of the important data about the pictures you shoot. This should be done while you're

actually shooting underwater. One of the best ways to record your exposures, shutter speeds and aperture openings is to use a plastic dictograph pad and a grease pencil with a colored lead. Other information that you may want to make a record of can include depth of water, time of day and the condition of the water surface.

If you're fortunate to own an underwater light meter you'll find it a big help in choosing your exposures. With a reflected type of meter (one that registers the light reflected from the subject), take a reading from your brightest area, such as sand, and from your darkest area, coral for instance. Then with these two extreme readings pick a compromise exposure between the two to shoot your picture. If you have an incident meter (registering the amount of light falling on the subject), just use it in the same type of light that your subject is in.

You'll notice that time goes fast when you're shooting underwater, and all too soon you'll come to the end of your roll. In the next chapter we'll discuss analyzing your first day's mistakes and how to correct them.



One of France's leading fotomermen, Serge de Sazo captured his fellow divers with his Rolleimarine as they cruise among the coral heads. Kodax XX, f/5.6, 1/50 sec., yellow filter, Tessar 3.8 lens.



**T**AKE ONE Bolex in an underwater housing; add one scuba and a sense of adventure; and hie yourself off to any of the scores of fresh-water springs in north Florida. Mix all ingredients with an unlimited supply of crystal-clear water; serve to stay-at-homes. Makes four to ten servings per showing.

The showing, of course, is of the color movies you made underwater.

And the utterly fascinating thing behind the whole idea is that every time you show your movies, you—as photographer and skin diver—re-live every soul-searching moment spent in the taking.

For the sake of this article, let's assume you've become relatively proficient in the use of your scuba (self-contained underwater breathing apparatus); have experienced the elation of stalking and eventually landing a sea bass with a

slender spear; have explored old ships on the bottom of the ocean. There's one facet of this underwater world where your talents have yet to be tried.

Underwater photography!

And with your Bolex, you're as well-equipped as you'll ever be to produce this type of movie.

For your 8mm "B," "C" or "D" model Bolex, housing can be had for as little as \$6.95, or as much as several hundred dollars. An inexpensive plastic balloon-type housing will take the 8mm Bolex nicely. Because of the flexibility of the plastic, aperture changes and focus settings can be made through the case. Although used successfully as deep as 50 feet, it's liable to become a little clumsy below ten or 15 feet because of the increased water-pressure.

For your 8mm "H" camera, or any of the Bolex 16mm cameras, you can't do better than the Bolex underwater housing which has been tested and approved by the U. S. Navy for depths down to 300 feet. The H-16 Reflex has spent many pleasant hours beneath the surface in its Bolex housing, and the results have been fabulous.

But let's get on to the actual facts of underwater movie-making. It's almost a necessity to use a wide-angle lens, because of the magnification factor of water, ranging from about one-quarter

in fresh water to about one-third in salt water. The Switar 5.5mm or 10mm (for 8mm and 16mm cameras, respectively) are perfect for this type movie-making.

The Bolex underwater housing permits aperture changes underwater so you'll not have to pre-set the f/stop. In case of other types, pre-set your aperture according to the table at the end of this article.

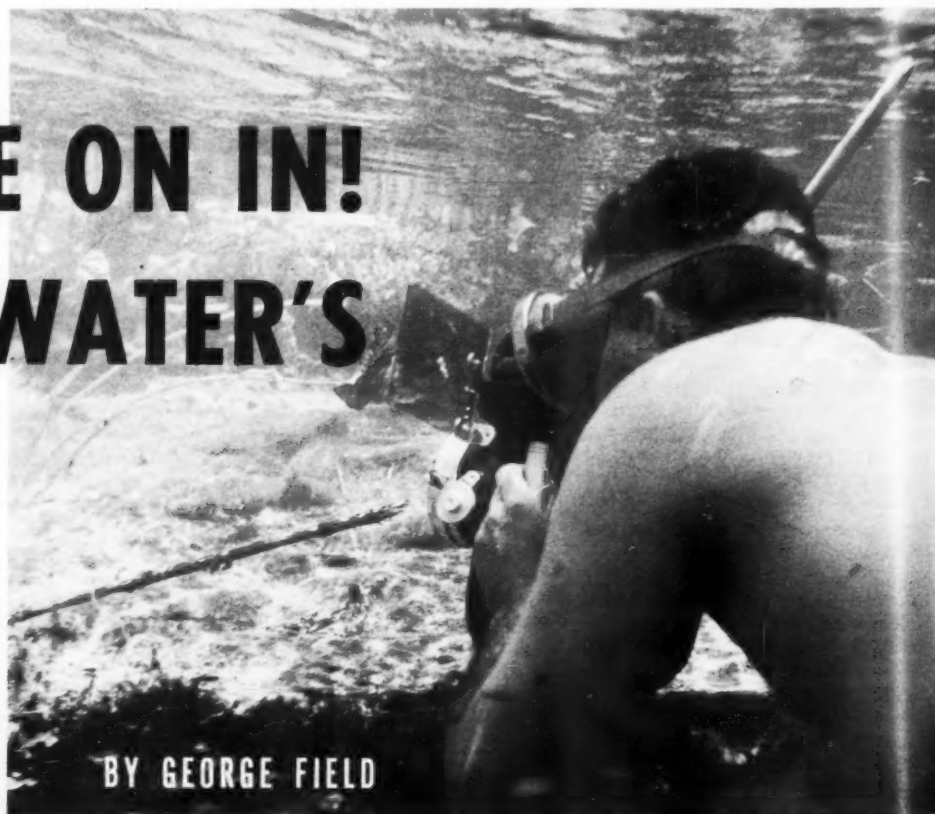
As for focusing the non-fixed-focus lens, check the instruction sheet and depth-of-field chart which you get with your lens, or which is available from the manufacturer. The hyper-focal setting for the widest aperture is chosen (on the Switar 10mm it's 16 feet at f/1.6).

A good opening shot with which to begin your movie is of the preparation of divers who'll swim with you. (Never swim alone, anywhere, any time!)

Then, as you go into the water and before the lens port has become wet, point your camera out over the body of water, trigger the motor, and slowly immerse the housing with the camera running. This is a very effective and startling way of showing your audience exactly what's happening without any narration. When projected, the scene will become a shade under-exposed as your camera gets completely under.

Once underwater, basic movie-making

# COME ON IN! THE WATER'S FINE



BY GEORGE FIELD

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rules will apply, with one or two exceptions. You'll find it's much easier to photograph a "rolling shot" underwater than it is on land. The water tends to keep the camera far more steady.

Secondly, let your scenes run about one-third longer than you would normally. This may seem unnecessary until you view some underwater movies with scenes running about the same as land-made scenes. It seems a psychological factor enters into the viewing of underwater movies.

Short, choppy scenes will leave your audience with a sense of unfulfilled desire, literally wanting to see more. Overly-long scenes, on the other hand, will surely put them to sleep, regardless of how beautiful the views are. Of course, over all, the tempo of your story will determine finally the actual scene length.

A man stalking a huge fish, for example, would do so just as a hunter stalking an animal in the brush; slowly, cautiously. The actual act of landing the fish would be fast-paced, including short action scenes of the spear leaving the gun and striking the fish, the chase if the fish is not killed, the eventual underwater wrestling match of man trying to hoist, against its will, a fish half as big as he is to the surface.

Movie-making in Florida springs, however, is a more slow-paced sort of undertaking. Spearfishing is prohibited in fresh waters of Florida, so the skin diver becomes an artist who captures on film the fascinating beauty of the underwater world.

Show your fellow diver swimming past you, headed downward, then as he goes by, swim over him until the bubbles from his scuba flow full into the lens of your camera. This is one of the most effective wipe-type closings, or fades you can use—but don't overdo it.

Don't forget closeups, either. A particularly beautiful bit of underwater



"Why! You're right, it's a regular wonderland down here."

foliage might, for the sake of your movie, attract the diver's attention. Show a long shot of his approach; cut to a medium-shot as he nears it; to a closeup of his hand reaching out to touch it, then to a bold closeup of his face through the mask as he studies it; move back to a medium-long-shot as he completes his examination and moves away.

Fish, too, can provide you with interesting action. Spot a school of fish swimming in shallow water. As you edge in close, they'll become alarmed, so stop moving. Wait a moment or so until their initial fear has dissipated and they return to their eternal search for food. Ever so slowly, bring your camera into position and begin to film making no unnecessary movement. The sound will attract them, and they'll almost always turn to give you a full head-on shot. Slowly start to move in on them. Before you get there, of course, they'll

have scattered to the many points of the compass. But you'll have worked up a nice action scene.

An effective closing scene is to position yourself above the diver. A couple of feet will do nicely. Then, on a pre-arranged signal from you, have him move past you to the surface, aiming for the slightly hazy view of the sun. Start your scene as he starts to move and follow him as he passes on into the sun.

Maneuver to place the diver between you and the sun. Keep him there as you continue to film. Let the camera run down. When projected, you won't even need a "The End" title; this scene will say it for you.

As is always the case in this fascinating game of movie-making, your movies will be just as good as your imagination and sense of production make them.

So, come on in; the water's fine.

**UNDERWATER EXPOSURE TABLE\***  
(at 16 fps. For 24fps. use one-third stop larger)

Depth (in ft.)	ASA 10-16	32	80	200
Less than 10 ft.	f/5.6	f/9	f/16	f/22
10-20	3.5	5.6	9	11
20-30	1.9#	3.5	5.6	8
30-50	—	1.9#	2.8	4
50 and deeper	—	—	—	1.9

**Notes:**

\* With bright sunshine between 10 A.M. and 2 P.M. in clear water. For shaded subjects allow at least one stop more for B&W film; 2½ more for color film.

# or widest aperture available if faster lens is used.

—insufficient light for satisfactory movie photography at these depths with these films—artificial lighting is needed.

**Filters:**

Below ten feet, color correction filters are needed. CC-10R is recommended for use between 10 and 20 feet (one-third more exposure); CC-20R between 20 and 30 feet (two-thirds more exposure).

These exposures are the result of personal experience in a number of clear-water springs. They are offered only as guides for experimentation and not as absolute.

Get too wrapped up in the photography end, and a sneaky, underwater current may flip you housing - over - scuba. Know your equipment. Dive with a buddy.





All suited up and ready to hit the depths.

**L**ET'S face it. Up until Mel Fisher and associates began supervising diving trips aboard the *Vellron*, most diving outings via boat were pretty dull affairs indeed. Oh, sure, there was always the exciting prospect of reaching a good piece of water where the depths contained the very best game just waiting to be stalked and speared. And, for those who get their jollies just sitting and staring at the waves while the boat churns out to sea, I suppose you might stretch a point and consider the old-fashioned, all-male diving outing a reasonably fat funtime.

Brother, have things changed!

Now you can gaze upon somebody more fascinating than a gull doing endovers above the chop. Now you can talk with a bevy of delightful creatures who, by comparison, put the legendary mermaid to shame for sheer enchantment and seagoing beauty. Because since the *Vellron* started this new manner of outings by interesting lovely, young female divers into coming aboard for a day's jaunt on the sea as well as beneath the sea and in the sea, the atmosphere of apathy, impatience and disinterest has vanished. No more sitting dejectedly on a coil of line, watching the turbulent wake with a mournful ennui. No more having only other,

unshaven, muscular companions with whom to talk diving and spearfishing.


Not unless you are averse to comely, vivacious little dolls who are not only superb company but also as anxious as you are to get into the water for a day's diving—that is, if you are really *anxious* to get into the water. If you are, you need visual aids, friend.

Now, I have never been aboard the *Vellron*, gentle reader. Photographer/Diver Don Morrison has—and provided the photo-illustrations accompanying these words to prove that whatever else trips on the *Vellron* may be, they are never dull, dismal nor ugly. Thus has the golden age of Social Life at Sea been ushered in.

Offered a sunlit day, a calm sea, sultry Hilary Harris with whom to lounge on deck and discuss world events (if that's the best you can do) or, perhaps, provocative little Ann Dahlitz for an underwater buddy-brother, you will have to be the epitome of masculine indifference to prefer an outing comprised of hairy-legged contemporaries and a few poor fish!

Naturally, I'm addressing the single men.

*Naturally?*

Well, let us say dutifully I suggest that a single man will not likely find skin diving under more ideal conditions than abound on these pages. 

# Take Your Camera Along...

## LIFE ABOARD CAN BE BEAUTIFUL

Photos Don Morrison  
Text Carl Kohler



Blondes, brunettes, golden sunshine, a langorous atmosphere.

There was a bug down there that big . . .



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Ann Dahlitz smiles for the cameraman.



Oui Oui, Monsieur the scenery under the Mediterranean surface is magnifique. French diver Serge de Saza fins by a coral covered reef. (Photo f5.6 at 1/50, Rolleimarine)

Diver equipped with Mako underwater camera housing at 70 feet off Catalina. Photo by LeRoy French, Marin Skin Diver's Club, using Plus-X film, f8 at 1/50.



THE AMATEUR underwater photographer can now turn professional in one easy motion. This motion is toward a camera store and the purchase of an electric eye camera, either still or for taking 16 or 8mm movies. The trend in general photography seems to be toward the electric or photo-electric cell controlled iris. This complex but effective means of controlling the iris on the camera makes it difficult for the amateur photographer to obtain a poor picture. This means that the photographer can now go underwater with the movie or still camera with no past experience, press a button, and come up with a more than respectable still or motion pictures.

At the present time, there are many excellent electric eye cameras in all fields. Bell & Howell Company has been producing electric eye cameras for the past year and a half, and Mako camera housings have been available for their 200 EE and their 240 EE cameras in 16mm as well as the 390 series in 8mm since their appearance on the market. I have seen many excellent underwater films taken with both 16 and 8mm Bell & Howell electric eye cameras. And Bell & Howell Company also produces an electric eye still camera, the 127 Infalible. This camera has also proven itself in underwater photography.

Recently the Eumig has appeared on the American market, a new Unilectric camera that features automatic aperture control as well as an electric drive for



Eumig electric drive 8mm with photo-electric cell controlled iris.

BY JORDAN KLEIN

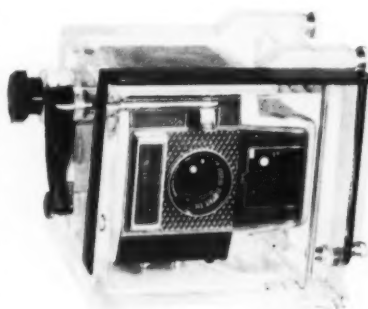
Mfr. of Mako Housings

# ELECTRIC EYES

the film transportation. This leaves a single control necessary in an underwater housing. This camera is powered by four pen light batteries and will shoot ten rolls of film on these four small batteries. The entire unit is very small and compact and its price is well within the average diver's range. The electric drive feature on any camera is a valuable one since in skin diving an entire sequence is often missed due to running out of wind so that the film stops in the middle of a very exciting scene and the audience is left to wonder what the outcome of the fish and diver struggle might have been. With an electric drive, of course, this is not the case since the camera can be started at the beginning of the dive and ended when the diver surfaces with his fish or the action has been completed.

There are more electric eye cameras being placed on the consumer market daily. The Revere electric eye still camera has recently become available

and is working out well in underwater housings. The Paillard Bolex B8L is proving to be an excellent underwater camera and, of course, Eastman Kodak Company has entered the electric eye field with a number of inexpensive mo-



Bell & Howell Infalible readied for underwater action, wind and shoot is all that's needed. Uses 127 film.

tion picture cameras featuring electric control of the aperture. There are many Dejur electric eye cameras under the water in Mako housings at the present time and they, too, are serving with great satisfaction. It will be only a matter of months before practically every camera company will announce an electric eye motion picture or still camera, since this is obviously the ideal way to overcome wasted film by the amateur photographer, and this holds true one hundredfold in underwater photography even for the expert. To summarize, I would say the electric eye cameras are going to be a great equalizer. They will create excellent results for the amateur and actually be of little value to the expert since he is already in all probability working with a light meter and carefully setting his exposure beforehand. However, any way you look at it, there will be more excellent pictures available in both motion and still work.

# ONE MAN'S CAMERA

By WALTER E. MASON

I AM an amateur underwater photographer, and I suspect there are probably very many people in a situation similar to mine. I work six days a week, have two young girls (under four) and love diving and photography. Brother, that's a tough situation, hence, the communication.

The best way to learn something is to do it; the next best is to learn from what somebody else has done. Here are some notes I have gathered; I hope they will inspire others to add to them or correct, as the case may be.

My camera is an inexpensive 35mm; F2.8 lens (poor), 43mm focal length, shutter speeds to 1/200 and second hand. It is housed in a 6 qt. aluminum pressure cooker. I purchased the controls, a winding and cocking lever, and a shutter release through a *Skin Diver* advertiser. The metal to metal lid to body fit is lubricated with vaseline for a good tight seal. There is plenty of room inside to place lead weights. A bicycle valve in the lid allows the case to be pressurized. It has held up to 20 lbs. internal pressure without leaking, so it should be safe to dunk it deep. The whole outfit, including the camera, cost around \$45.00.

Color photography requires very little technical thought for the amateur unless you do your own color processing. Using a role of "properly" exposed black-and-white film as a standard, pure mathematical computation will tell you what shutter speed—F stop combination—to use. I shoot Anscochrome (A.S.A. 32) at F 5.6 at 1/50 in the Laguna area of Southern California from the surface to about ten feet. Super Anscochrome will go about F 8 at 1/100 for the same area and depth. For both black-and-white and color, I keep the focus in close, about five feet, even closer if I want to shoot mainly sessile reef inhabitants.

Lighting is the prime factor for a good color shot; try to keep the light source to your back.

Color is nice, but black-and-white films offer a much greater field for experimentation, which I do in the small darkroom I have in my garage.

My first problem in black-and-white underwater photography is still my worst, and I doubt that there will be many suggestions to ease it. This is to get to the beach on a Sunday (my day off) with the sun shining and the water somewhat less than opaque. *Note here to Kohler:* I bring my family along, too, and find that my wife makes a very nice underwater model when we can find someone to eye the younguns.

The second problem is more universal and I would like to quote A. Ivanoff in the March '54 *Skin Diver*: "... as for the diffusion of light by water, it

is even more troublesome, for it produces a sort of luminous veil in front of the camera which diminishes all contrasts and hides completely the background... it is impossible to get rid of this veil by means of a colored filter." That's a fact. This problem can be only partially solved in the darkroom. The cruddier the water, the harder it is to get contrast in the negative and thus in the finished print.

There is an axiom in photography that advises underexposure and overdevelopment for flat subjects. Try it, every little bit helps. The biggest help to the contrast problem is the exclusive use of Kodabromide No. 5 hard contrast paper for all underwater prints. This will usually do a pretty good job. I normally use Varigam paper with the accompanying filters, but even the highest

(Continued on page 43)

Fish and noodle kelp present striking design. (Tri-X film f/11-16 at 1/200, depth 8-10 feet. Ten minutes developing in FR X 33B at 80° F. Kodabromide # 5.)



Marv Warhman at Laguna Beach. (Plus-X film shot at f/8 1/100, depth 10 feet. Developed 18 minutes in FR X 33B at 64° F. and printed on Kodabromide # 5.)



# DRIFTWOOD

Please address all notes, letters and stuff to:

"DRIFTWOOD"  
Skin Diver Magazine  
Lynwood, California

... Now read this ...

You're probably going to howl like a horde of anguished banshees when I tell you I'm giving the Cartoon-Caption Thingie the deep-six. Nevertheless, that particular item is now down the tubes. Ever since we started this bit, the mail has been gradually turning into precious little else than caption submits. Despite my refined screams for colorful comment, offbeat ideas and assorted observations, which will provide interesting reading, you've been sending *nothing* but caption submits. *Pfui*. I realize that you might fight back by simply ceasing and desisting altogether in the letter writing department—and that's your prerogative, of course. However, if you *do*, you may as well kiss *Driftwood* bye-bye because it has only come this far thanks to the mad notes, stimulating photos and wild theories you've been sending in, lo, these past four years. You think about it. Imagine this gung-ho rag without *Driftwood*. Imagine, for instance, that I run out of petulant opinions and am forced to publish Tide Schedules or a comprehensive listing of extinct shellfish. Since I am under contract with "Skin Diver" for the next few months, that's precisely what will replace *Driftwood* unless you splendid characters start mailing in the kind of psycho communications and provocative pix that built this imaginary jetty in the first place. And don't think all this maundering is so many idle threats. If I wanted to threaten you, I might promise to publish two full pages of Pen Pals. Now *there's* a sick thought if there ever was one.

## DEPARTMENT OF RAPID HEARTBEATS . . .

*Silver bubbles frantically escape . . .  
From the unreality of  
Three-hundred feet, and I—  
Watching them skitter upward—  
Find myself wondering why they  
Are not enchanted  
By the magic of the depths.*

ROBERT LAMONT  
Lakeland, Florida

Three hundred feet? Oh, *come on*, now!

*I must go down in the sea again,  
Down deep, 'cause I'm in the mood—  
And all I ask is my air should last,  
So I don't end up . . . fish food!*

BILL OIEN  
Ashland Wisconsin

Boy, some people want *everything*.

*Lover, when you hurl yourself  
Into the waiting sea,  
Lover, remember your obligation  
To return to waiting me.*

DEENA ELLEN JONES  
San Francisco, California

If you were any kind of a woman, you'd go with him.

Those who would like to have an original cartoon drawing by Carl Kohler put on their air-tanks or their exposure-suits will find this possible if they simply go to Bill Hogan's UNDERWATER SPORTS SHOP, in Long Beach, on September 5th, 1959, where-upon the request of any customer who purchases a minimum of \$5.00 worth of equipment—Carl Kohler will happily paint a cartoon on any item large enough for him to work.

## HAVE WE BOUGHT OUR OWN UNPOPULARITY, MAYBE?

Not too long ago I attended (as an invited guest) a meeting of the Isaac Walton Club in my area. Now this particular outfit—and I say this with all due respect to the obvious good which their conservation policies have wrought many times—is a real Mickey Mouse group since the majority of the members seemed to be more interested in butchering rabbits and deer with high-powered rifles rather than in catching fish as the name would imply.

However, I did talk with a few members whose main sport-interest lies in the hook, line & sinker bit. During the general chineft, one of them remarked: "Man, you skin divers sure have asked for all the static you get by holding those continuous spearfishing contests everywhere! No wonder the public has the idea you guys are out to kill off the entire fish population of lakes, rivers and oceans."

I went home with these cheery words bouncing around in my alleged mind, and I've been hearing them tumbling about in there ever since.

This thinly veiled accusation is hardly news to anyone who qualifies as a spearfisherman or skin diver with at least a week's diving and/or underwater hunting behind him. We've all probably heard it flung in our individual and collective faces more times than we may care to remember—and each time it's just as depressing. You know and I know we are not slaughtering any such thing as the "entire fish population." Unfortunately, even though our submarine didoes have been going on for a long time now and even though they've been clearly explained thousands of times in all media—John Q. Public (especially John Q. Public who likes to fly-cast or surf-fish) just isn't buying the facts concerning our intrepid activities.

And, frankly, I am mildly disturbed by the possibility that publicity regarding our varied spearfishing contests may be only helping to reassure John Q. that we are, indeed, a pack of blood-thirsty, wild-eyed psychos out to massacre everything that swims, floats or creeps underwater.

Although I, personally, have done no spearfishing in more than fifteen years and take no part in spearfishing meets, I do not condemn them for two reasons: (1) Spearfishing contests have played a very important role in helping the skin diving sport develop in this country. (2) I believe it's each person's privilege to spearfish or not spearfish as he sees fit.

But I am beginning to wonder if we have not unwittingly put the emphasis upon spearfishing to our own detriment. After all, for every guy who can afford a speargun there are, at very least, three or four who cannot—and must confine themselves to harmless exploring, shell collecting and other phases of diving whereby no marine life worth mentioning is destroyed. Furthermore, there are tens of thousands of skin and scuba divers who have never descended with anything more lethal than a camera in their hands. *Why*, then, has all the publicity somehow been focused upon Gung-ho Joe and his speargun capers?

You tell me because I don't know.

There isn't another diver in the whole, wide, everlovin' world who is more aware of the ridiculous opinions of the rod and reel set, when they concern skin diving, than your old uncle Kohler. I've been doing verbal combat with the creel-carrying boys for years in a sincere effort to change their minds about our sport. In fact, a year or so ago, I even managed to get my big mouth into the door of the now-defunct FISHERMAN MAGAZINE—which was practically the Bible for rod fishermen—with a blunt article that told how really absurd were their fears about us and our alleged submarine carnage. And I figure if that piece convinced even one fisherman out of every hundred who may have bothered to read it—we were ahead of the problem a few steps more.

"Aw," you may mutter, "Who cares whether or not John Q. Narrowmind learns the truth about diving?" Well, Buster, I care. And you should care, too, because if you multiply John Q. Public at the voting booths whenever anti-diving or anti-spearfishing bills come up, you will easily understand there is really only one way to prevent unfair legislation against our sport. And that singular method is to reeducate millions of non-diving John Q. Publics to the fact, if nothing else, that spearfishermen (in the majority of cases, anyway) are not taking more than their reasonable share of marine life each year.

It's *our* responsibility to see that the right *kind* of publicity, regarding diving as a whole, is slathered out, and should we fail to do this in the years ahead—there's a very horrible possibility our kids will see the day when spearfishing is legally outlawed in all the waters of these continental United States. As I have said, I have no personal interest in the secured future of spearfishing other than a solid determination that those who do

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enjoy it may continue to freely do so within the limitations of logic and good sportsmanship.

Summed up, the point is: *Why* is the majority of drum-beating centered around spearfishing contests when it can just as nicely be equally spread over all the other phases of skin and scuba diving going on everywhere at the same time?

## DEPARTMENT OF DISSONANT THEMES AND VARIATIONS . . .



Contest or no contest, I just want to show you stay-at-homes what you are missing—to wit and to-WHOOO—European Women. The one pictured here (delineated may be a better word since there are lines there) has been diving with me in the Baltic, North Sea and along the French Riviera until we got some sense and came to Spain. In between times we got married. She's a Kraut but speaks five languages better than I got me mine English. Incidentally, I got many an ab, in the cold waters off La Jolla, long before we had any exposure suits or other luxuries. Guess these icicle-dripping boys get soft with modern improvements. I've got a fascinating story on my diving dogs if you think anybody's interested.

FRANK B. LANE  
Villa Concepcion  
Alcala de Guadaira  
Sevilla, Spain

Now we have proof that skillful, lecherous old divers don't just fade away: They gallop off to sunny Spain where they cavort around in the water with their gorgeous, European wives and feel pity for those of us who battle freeways, income tax and the rising costs of wine. Frank, sir, you have it made. I am livid with envious rage.

Greetings to you from all the boys down at Spidabl's, who enjoy your column every month. We just thought you would like to know that there are people who enjoy your two-cent's worth. Even more, we enjoy the pictures that you have each month. Say, why don't you ask them if they would like to send their pictures to me, instead.

MARK OLSON  
Fergus Falls, Minnesota

Yeh, why don't I.

In answer to Rheba Setinsky, who waxes vitriolically over your magazine's "anti-Beat" viewpoint, I would like to make a few remarks. I hope it is not impolite to suggest to Miss Setinsky that it is hardly the act of a non-conformist to hold a lifetime membership in anything, as she says she does in a group of Beats, nor to wear a label. She seems rather proud to slip herself conveniently into a niche with a little tag around her neck bearing the word "Beat." I trust I will not sound anti-intellectual if I suggest that Miss Setinsky might desist from dissipating her emotions on the rather unimportant editorial viewpoint of a pleasant non-intellectual publication, and turn, instead, to that improvement of her own intellect which may eventually enable her to understand her own inconsistency and desperate need to "belong."

(MRS.) JANE M. STACK  
Brooklyn, New York

Since your words seem to be, more or less, directed to Beatnik Setinsky, I sent her a copy of your letter and here is what she wrote in reply, sending it Air Mail, Special Delivery:

**SKIN DIVER—September 1959**

## CARTOON-CAPTION-CONTEST WINNER— (for September)

"Haven't you fixed that drain yet?"

Mrs. James C. Williams  
440 Mankin Street, Albuquerque, New Mexico

Kindly inform (Mrs.) Jane M. Stack that her analysis of my "need to belong" is precisely the sort of alleged, logical reasoning so sickeningly in evidence in today's conventional society and apropos of exactly nothing. I imagine (Mrs.) Jane M. Stack lives in a pleasant, cozy little world of utterly complacent platitudes where Virtue rules Supreme and Good is easily detected from Evil. I consider it rather pretentious of (Mrs.) Jane M. Stack to suggest that I—or any other, free human being—desist from anything whatsoever. I am quite willing to bet that (Mrs.) Jane M. Stack is a housewife, the mother of several lovely children, a patient wife and secretly addicted to reading confession magazines (or writing for them) in those hours she fails to devote to P.T.A. meetings or sundry other Do-Good activities.

RHEBA SETINSKY  
North Beach, California

This is all very fascinating, ladies, but what the hob does it have to do with diving?

Most of the people who write in are always recommending the Driftwood Column. With all these recommendations, what's there to recommend except a few childish remarks which are utter nonsense?

ALEXIS TIETZ  
New York City, New York

Yep, that's our commodity—utter nonsense.

Kobler, I'm so darned mad I could break your neck in three places and still face myself in the mirror. Until you began knocking scuba diving, my husband was perfectly content to do his diving with a snorkel. Then, he said: "If that jerk, Kobler, is against scuba—it must be terrific!" And now my promised sports-car (or the down payment, anyway) is sitting on the closet floor in the shape of several hundred dollar's worth of scuba and exposure suit equipment!

BETTY L. MILLER  
San Luis Obispo, California

And I suppose you would like me to start knocking sportscars?

There was a time—not long ago, too—when I considered myself a very rabid Driftwooder. No more, boy, no more. If you aren't going to back up us diving wives, I think we are sheer fools to back up Driftwood. Would you care to retract your absurd remarks concerning Togetherness underwater and apologize like an intelligent little gentleman?

ANN CARPENTER  
Ann Arbor, Michigan

Honey, are you kidding?

I've been trying to do a little checking on you. I've talked to people who claim they know you and none of them have ever seen you dive. You never seem to participate in any of the local diving activities, and—as far as I've been able to discover—you have not been known to report any of your own (if, indeed, any) diving activities. I think you're a complete fake who has never been in any water deeper than that of a bathtub. What do you do?

DICK BENDER  
Los Angeles, California

Well . . . I wade real good.

## AND AS THE SETTING SUN SLOWLY . . .

Again, allow me to repeat that the Cartoon-Caption-Contest is nothing more than a hollow memory as of this issue, and you've only yourselves to blame for this wretched (or fine, as the case may be) turn of events. Gone . . . gone with the vagrant wind are my pleas for more photos or delectable wenches and interesting underwater shots. No longer will I beg you for more of your insidious notes and raving theories. Unless all this is voluntarily forthcoming, you will have the pleasure of reading something intellectually destructive like *A Detailed Analysis of Sub-Strata Marine Life Found In Geologically Unexpected Areas* where once the fabulously spirited Driftwood bobbed merrily between the lively currents of human opinion.

It's your move, you characters . . .

Katatonic Kohler



New modern building with adjoining pool represents 3,000 square feet of area devoted exclusively to skin diving equipment, sales, service and instruction.



Within the store is a large showroom with adequate area to display all equipment, a workshop for suit manufacturing, lung and tank repair and a compressor room for Rix compressor and storage tank.



Especially designed pool for diving instruction is 20 X 45 feet and is ten feet deep. The pool is almost entirely deep water to provide maximum room for teaching. Instruction program is 20 hours and facilities will handle up to 24 students per week.

## THE NEW LOOK IN DIVE SHOPS

A new look in Dive Shops is sweeping across the country, ocean front or lake front the modern-day specialty shop is fast becoming a true center of activities for the underwater sportsman. Many well-known dealers, such as the one featured on this page, now have a swimming pool or tank for instruction, larger stock and display rooms, full capacity air compressors, and in several cases, their own boat for the convenience of their customers... the skin diver.

**T**HE NEW Underwater Sports Shop opened recently at Belmont Pier in Long Beach, Calif. Owner-manager Bill Hogan states that it is the culmination of five years of planning. He was in business at the old location for almost six years and says the valuable experience gained there is the basis for the new operation.

He feels that the key to successful operation of a retail diving store is an adequate instruction program and has planned his new building accordingly. The large pool adjoining the store will be completely enclosed for year-round diving classes. A separate classroom for lectures is also on the premises. His diving classes include scuba diving, skin diving, and a junior frogman course for children. He uses the Los Angeles County diving program of instruction.

The new store and pool represents a \$50,000 investment, including a 42-foot boat, to be used exclusively for skin diving, which Bill will operate from Belmont Pier. In selecting the spot for his new location, he carefully chose an area close to the water and with adequate parking facilities. In addition his building is designed to allow for expansion if necessary.

Hogan says the investment in the new building is a sound one, as he expects considerable new business due to the rapid growth of the sport. When asked why he did not branch out into other phases of water sports activities, his opinion was that it is not possible to do a good job with diving equipment if other types of equipment are handled.

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# Personality Spotlight

By CONNIE JOHNSON

## JAMES CAHILL

*from material submitted by Bob Cahill*

NICKNAMED "the dean of the deep" by his New England diving buddies James Cahill has a staggering list of underwater services, accomplishments and feats to his credit.

Recently appointed chairman of a special commission on skin diving set up by the Massachusetts governor, he is a former U.S. Navy frogman, an underwater salvager, instigator of diving classes in his area and was the first man to enter New England waters with a lung strapped to his back.

Returning home to Salem, Massachusetts, after seeing action as a frogman in the U.S. Navy, he decided to go into the underwater salvage business and to teach other enthusiasts how to use scuba properly. He started giving lessons in the local YMCA pool and today sixteen New England Y's advertise Jim Cahill's diving school.

His first underwater recovery came as the result of a tragic accident. A plane, with pilot and two passengers, crashed into Boston Harbor. The pilot and one passenger escaped, but the second passenger, an ex-Massachusetts Attorney-General's son, was feared trapped in the plane. Jim, who was having a cup of coffee in a nearby restaurant, rushed to the scene where police were dragging the ocean bottom without success. Volunteering his services, he donned his equipment but he, too, was unsuccessful the first day of search. On the second day, at a depth of forty feet, he found the mangled craft and the body of the young man.

In the middle of a blinding snow storm one night in November, 1955, police asked him to rush to a city forty miles away where an automobile had skidded on the slippery roads, crashed through a fence and landed in the river. Probing the depths of the dark freezing waters, he located the overturned vehicle and recovered the occupants, three sisters.

Jim Cahill has been called by police on innumerable occasions to search for accident victims and at least one time to assist in the recovery of a murder weapon. A body had been found on the banks of the Merrimack River in Amesbury. Police called on Jim to comb the river bottom for evidence that would lead to the solving of the murder. On the first day of diving, he recovered a revolver. Although the Boston papers headlined the find as that of the murder weapon, it was later discovered false. After five days of tedious underwater work, he brought up a twisted steel knitting needle which led police to the guilty party.

He has performed many civic deeds including the recovery of nine victims from ocean and river depths, two of them under solid ice, discovered the location of four sunken aircraft and the remnants of four wrecked ships.

He has descended to a depth of 250 feet while searching for the sunken freighter "Oregon," a ship lost at sea sixty miles off the coast of Nantucket. He has joined in sunken treasure hunts at the Isles of Shoals off the New Hampshire coast.

For the last eight years, he has spent at least one day of each week underwater, summer and winter, no matter what the weather conditions. His underwater exploits have taken him as far south as the Virgin Islands, as far west as California, as far north as the waters off Greenland, and as far east as Korea.



## BUILD YOUR OWN

(Continued from page 21)

case. Make up suitable plastic cradles for the camera and cement to this mark. Plastic blocks cemented to the backplate will keep the camera within its cradle.

### Camera Controls

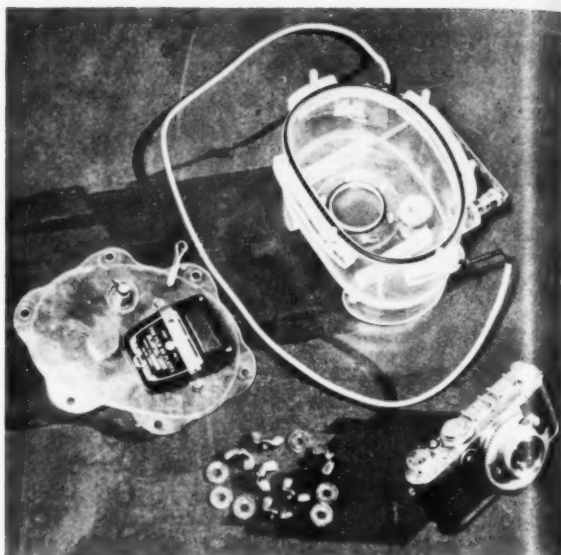
Now the camera position is fixed and you can go to work on shutter release, film advance, or camera winding controls. In the case of the Leica illustrated, the end of the film advance control shaft was split, spread apart and the two forks ground to round tips, engaging with the two depressions in top of camera knob.

The shutter release control through the backplate utilizes a wing nut with one "wing" cut off and screwed to the end of the shaft to actuate the shutter release button. With a little imagination a trigger-type release control could be made. The important thing is to make it functional. Everything must work well under less than ideal conditions.

### View Finder

This completes the basic camera case. A good frame finder, however, is of great importance. Due to the unusual conditions involved, it's very easy to cut off a part of the subject in underwater photography. Normal optical finders are of little use due to the distance from

Leica and underwater housing. Note how strap holds light meter to back plate. Film advance knob is pulled up to permit removal of camera.  
—Mart Toggweiler.



eye to viewing lens necessitated by wearing a face mask. The regular optical finder on your camera, however, if it matches the focal length of the lens, is a valuable aid in lining up a frame finder on the case. The frame is generally hinged to make the case more compact for transport. The rear sight should also be hinged or removable. Parallax is not too important with wide-angle, but should you be doing a lot of closeup work, small crossbars can be soldered to the rear sight for, say 2', 4' and 8' distances. A large brass cotter pin, cut to proper length and inserted into a hole drilled in the backplate works fine as a rear sight.

### Accessories

Handles are an item best left to your own discretion. They are more important on movie camera than with still,

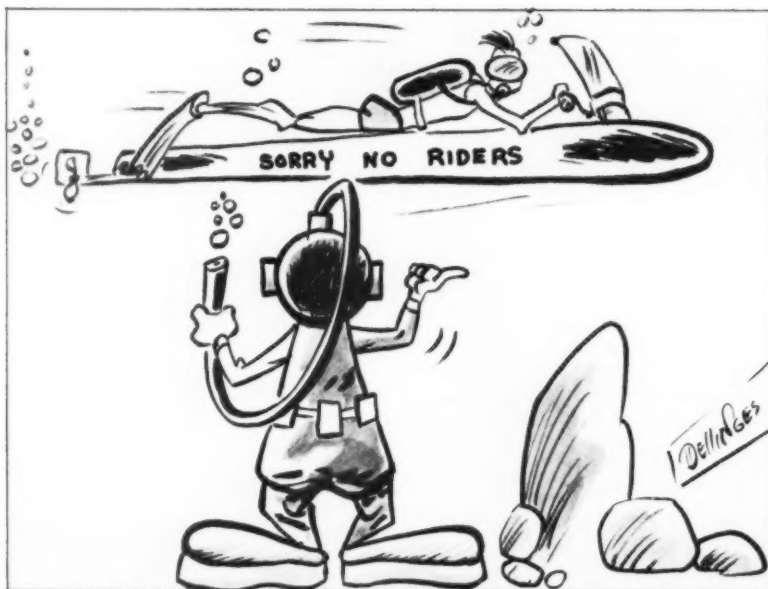
but are certainly convenient on either when handling the case out of the water. Pistol grips are ideal.

One other thing best mentioned at this point—never drill any holes through the case other than for camera controls. When mounting anything on the exterior of the case, first cement a suitable plastic block in position and secure the fixture to this block. This way not only is the danger of leakage eliminated, but in case the fixture were accidentally struck the plastic block would suffer the damage and not the case.

How about pressurizing the case? It's not necessary unless, for example, an electrical switch is covered by a rubber diaphragm. External water pressure actually aids in sealing the backplate. Safe working depth is closely related to area of flat surfaces and thickness of material. The Leica case has been down 90 feet.

Ballasting is important. The case should either just sink or just float. Most experienced diver photographers prefer a case with negative buoyancy because it feels more natural in the hand and also because it can be left lying on the bottom while one is doing something else.

Flash is a very desirable addition to a still outfit, but its use has been quite limited. A direct reading light meter is a well worthwhile addition to stills or movies for consistently good exposures, especially with color film. Other technical data is not so easy. The best advice is—go out and shoot pictures; lots of them. But first, unless you are an experienced diver, learn to feel at ease in the water. A lung is almost a necessity if you hope to get variety into your work. The telltale pattern of light reflections off the surface gives away a picture taken in shallow water. Go a little deeper for authentic shots.



# CAMERA UNDER THE SOUND



By Chuck Angell

**U**NDERWATER photography in our northern waters presents quite a challenge. Weather and water conditions often prevent photography altogether. The waters of the northern Pacific swarm with many billions of macro- and microscopic organisms called plankton. In the spring and summer these tiny creatures account for visibility of two to four feet in some areas. And even in very clear water the plankton gives a green tint to color pictures unless a correction filter is used.

But precisely because of the hordes of plankton many species of marine life abound in the shallow inland waters, such as Puget Sound. Rockfish and perch provide color and action in both still and moving pictures. Beautiful sun anemones, which look like huge flowers from another world, come in assorted colors and provide sparkling backgrounds for still shots of divers about their everyday chores and pursuits. Many parts of Puget Sound have never seen a diver and the fish are very curious about the "two-tailed, one-eyed fish" that is invading their homes. Rockfish of five or six pounds (which is good-sized for a rockfish) will often approach within several inches of your mask or camera lens. This makes for some very interesting closeup shots which are usually quite amusing because of the

funny look on the fish's face as he tries to follow your bubbles up with his eyes.

Octopus wrestling, a sport unique to Puget Sound, provides amazing action shots for both still and movie fans. So there is no shortage of subjects for the underwater lensman.

My experience has been with still photography, so here are some bits of information we have gathered over the past summer.

The fellows I dive with use home-made cases with all controls, except the shutter speed, available outside the case. Plexiglass has proved most satisfactory because it is easy to work with and your f-stops, focus and film counter are easily visible through the plastic. Both rectangular and cylindrical shapes are used, depending on the type of camera to be housed. The new universal housings should prove popular in this area as more divers realize the potential of underwater photography.

As for film, the faster the better. The new high speed, fine grain black-and-white films give good results at depths of 40 to 50 feet without flash. However,

most marine life is concentrated in 10 to 40 feet of water, and on a clear, calm day very good color pictures can be taken in these depths without the aid of flash. Super Anscochrome has proved to be excellent because of its high speed and very good color rendition.

Typical exposures on a calm sunny day might be 1/50 of a second with a lens opening of f:5.6 at a depth of 30 feet. I prefer to use a shutter speed of 1/25 of a second because the lens may be stopped down, resulting in greater depth of field. Because of the large amount of plankton, distance shots lack contrast, so you can see that a wide-angle lens comes in handy. Not only does it allow you to approach the subject, but it also affords greater depth of field.

An exposure meter is almost a necessity. Different types of bottom conditions are encountered in Puget Sound and each type results in a different kind of light reflection, making a successful guess at exposure quite a long shot.

But even under these often difficult conditions beautiful pictures, both stills and movies, can be taken. Underwater photography is an excellent method of promoting interest in your club, the sport of diving in general, and in the fabulous world of the earth's last frontier. ➤



# Letters

... in the July issue of "Skin Diver," the H. J. Anderson Company ad offered to give 50 of their new skin diving lights to the first half a hundred organized clubs sending in their request along with the name of their favorite dealer. The offer was designed to build good will for dealers and give club members the opportunity to try out the revolutionary new 40,000 candlepower lights with hopes that some of the club members would order additional lights from their dealers. Within a week after "Skin Diver" was published, the 50 Free Anderson Lights were on their way to dealers for presentation to the clubs. But then it happened! Requests continued to pour in! Harold Anderson, President and General Manager, had to take some alternative. (He couldn't give away his entire production.) So he has requested "Skin Diver Magazine" to announce to all clubs and dealers that although their requests were late for the free lights, the company will sell the dealer an Anderson Light for presentation to the club at one half the dealer cost.

According to Harold Anderson, "We were amazed and very pleased by the many wonderful letters from clubs and dealers commenting on our offer and the new features that the light incorporates. We just wish we could give a light to every club in the United States and Overseas. However, we think the offer to split the dealer cost is fair and I'd personally like to thank everyone who was kind enough to write us!" Andy added with a chuckle, "We're firmly convinced that the light is good, otherwise we couldn't give 'em away—but what we need now is orders!"

The Anderson Light is pressure sealed for use in depths up to 300 feet and operates on a standard lantern battery available anywhere. The light features a spring mounted sealed beam unit that absorbs shock and casts a beam up to 100' underwater. The entire lamp is copper nickel chrome plated, has a submerged weight of only one pound, and remains upright underwater. An adjustable neoprene strap allows it to be carried on the arm or wrist leaving both hands free. Two other exclusive features are the rotary type switch that prevents turning the light on or off accidentally, and an aiming handle on the lamp that gives complete control of the beam at all times.

M. R. Hughes  
H. J. Anderson Co.  
Kansas City, Mo.

... I am curious to know how many readers have admonished the learned Dr. Kirker for advocating "decompression" in preference to "recompression" for the treatment of air embolism. Perhaps it's a small point, but some Beatnik purist might take the good doctor at his word and a serious mistake in treatment would occur.

Albert D. Stover, HMC (SS)  
School of Submarine Medicine Technic  
New London, Conn.

... A word of thanks must go to you for running my article "Unnecessary Eulogy" in the June issue of SDM. So far I've banged out over 114 letters in answer to an overwhelmingly enthusiastic group of individuals who wrote in. I even received a personal visit at my home from one who read the article. Many of these people who wrote me actually seemed "starved" for proper instruction.

Ronnie Gann  
Hartford, Conn.



Dr. Hill examines museum specimens.

## DR. HILL RETIRES FROM L.A. COUNTY MUSEUM

Dr. Howard R. Hill, Conchologist and Chairman of the Scientific Committee of the International Underwater Spearfishing Association, retired in August after 37 years with the Los Angeles County Museum.

Through the auspices of Dr. Hill, who has served as a member of the Executive Board of the I.U.S.A. for nine

... Modern day Fishery Biologists are commencing to use new methods, of collecting valuable biological data, which draw a truer picture of the actual situation in the aquatic environment.

Skin and scuba diving are two of these new methods. In order to keep abreast of the latest innovations and newest pieces of equipment, it is a "must" to subscribe to your magazine.

Would you be so kind as to include us on your mailing list and send the bill to me.

Richard F. Dumas  
Conservation Biologist  
Div. of Fish & Game  
New York

... Water Wrigglers' Club, San Salvador AAFB, Patrick AFB, Florida—I wish to congratulate you and your members on the exceptionally fine job you did in raising money for the International Spearfishing Contest American Team; it should serve as a shining example for all the other clubs.

You are a small club, located 'way out in nowhere, with no resources except the enthusiastic spirit of your membership, and yet you managed to donate \$52.00!

This is an outstanding performance, second to none on a per capita basis. On total experience to date, it is second only to the magnificent film-lecture-show put on by the Illini Aqua Scouts.

Nixon Griffis  
Vice Chairman of  
Finance, World  
Championship Com.

... re the two photographs of the unknown creature in the June issue of "Skin Diver." Having done considerable research on unknown sea creatures, I find that the creature, believe it or not, does in many ways correspond to the Scottish Loch Ness Monster. I spoke to people who saw the "monster" and what they told me makes me think there is a chance the two creatures may be related.

Walt C. Deas  
Brisbane, Australia

years, headquarters were obtained for the Association in the department of Marine Zoology which Dr. Hill has directed as Curator for the last 27 years.

During his tenure, Dr. Hill organized the collection for the Junior Museum that later developed into the Education Department of the Museum, the Department of Invertebrate Paleontology, the Department of Minerals and the Department of Marine Zoology.

He received his M.S. from the University of Illinois and his Ph.D. from the University of Southern California at Los Angeles. He spent four years traveling on fish investigation for the U.S. Department of Agriculture's Bureau of Chemistry out of the Food Research Laboratory at Philadelphia, Pennsylvania. First working as Field Collector for the Los Angeles County Museum, he later became Senior Zoologist and finally Curator of Marine Zoology.

Dr. Hill is named among American Men of Science and is Past President of the Southern California Academy of Science and Honorary Life Member of that organization. He is a member of Sigma Chi and Phi Sigma. He is a Charter Member and has been a guiding light of the Los Angeles Aquarium Society. He is founder and sponsor of the Pacific Shell Club and Past President of the Conchological Society of Southern California. He is also a member of the American Society of Parasitologists and Society of Ichthyology and Herpetology.

Heralding his intense activities in many scientific fields was a trip to the Gulf of Lower California in 1926 in which two new species of large game fish were discovered. Dr. Hill identified them as black marlin and Pacific sailfish and in collaboration with Dr. David Starr Jordan named the new species of sailfish in honor of Zane Grey (*Istiophorus greyi*). The new species of swordfish was a world record at that time—509 pounds.

Understandably, Dr. Hill was interested in the International Underwater Spearfishing Association as an organization "To keep an attested and up-to-date listing of world records for underwater spearfishing."

## HOME CONSTRUCTION OF UW CASES

(Continued from page 15)

all sizes in hardware stores, although the bigger sizes may have to be specially ordered. Special-shaped gaskets can be made from layers of self-vulcanizing rubber electrician's tape. When installing O ring or gaskets, coat them heavily with vaseline to aid sealing of small nicks and to provide lubrication.

### CONTROLS

Installation and placement of controls depends upon the camera used and the builder's imagination. It is recommended to use the brass-copper tubing fitting which can be purchased at a hardware store for about 15 cents. To install, just drill and tap a hole in the case and screw the fitting in tight. Use 1/4 inch brazing rod for control shafts because it can be easily worked to attach to the camera controls. Diagrams I-1,2,3,4.

### FLASH

If flash is wanted, install a B-C flash unit inside the case and run the wires to bolts going through the case, or solder the wires to two control shafts. Run the outside wires over to a reflector socket. There is enough juice in a B-C flash unit to cover any loss of voltage through the water.

### TESTING

To test the camera housing (without camera), weight and lower the case to twice the depth at which it is planned to be used. Leave for 5 to 10 minutes, then pull up. If there is water in it, find where it leaks and fix it; if there is no water in it, it is safe to use. Next put the camera in the housing and adjust the buoyancy to a slight positive, so that if the case is left alone it will rise slowly. A well-constructed case will need no pressurizing.

### TIPS

Never throw the case around, as it may spring a joint and leak.

Never leave the closed case in the sun before diving or condensation will form on the inside upon striking the cooler water. A little bag of Silica Gel will help to prevent this.

Never rub salt water off a plastic lens port; it will scratch it. Wash it off with fresh water.

If the camera does get wet, put it into a pail of fresh water as soon as possible and then take it apart as far as possible without voiding the guarantee. Next dry the parts in a stream of warm air and put them back together. Send the camera to the factory for a checkup and BETTER LUCK NEXT TIME.

# Fish Story....

"It should be obvious even to a nearsighted Lobster," said the Big Fish, "that *They* are planning to wage psychological warfare against us."

"They are?" said the Small Fish.

"Certainly. Look at the facts. Examine *Their* history of action against us."

"How's that?" said the Small Fish anxiously.

"Well, first, *They* relied upon nets. Just lousy old nets. Any fish worth a fin didn't worry much about those nets. For one thing, there was always deep water." The Big Fish smiled knowingly. "In fact, my great-great-great-great-great-grandpappy once chewed his way out of a net! No, nets were a leadpipe cinch."

"Is that a fact!"

"Darn it all, I said so, didn't I?"

"What came next?" said the Small Fish.

"Lines with hooks on them, that's what came next. Lousy lines carrying lousy, tempting bait. *They* got results with those lines and hooks, let me tell you. Generation upon generation followed—each losing hordes of fish to those lousy, baited hooks—before somebody wised-up and started the word around."

"What word?" said the Small Fish carefully.

"Don't Never Nibble Nothing What Dangles," quoted the Big Fish. "It did the trick, too. *They* began going mildly nuts seeing us swim around—too smart to bite on any lousy old baited hook!" The Big Fish chuckled wickedly.

"Har, har!" giggled the Small Fish. "We showed *Them*, didn't we! Guess that taught *Them* to fool with us fish, eh!"

"The heck it did," muttered the Big Fish.

"Oh, no!" moaned the Small Fish.

"Yep. Before we had any idea of what they were going to try next—*Splashity-bam!*—*They* were coming down after us! It wasn't so bad at first. There were only a few of *Them* and any fish with half a wit about him could, with a few gobs of fantastic luck you understand, get away and be around to run another day." The Big Fish frowned. "In hardly no time the water was alive with *Them*. Thousands of *Them*. Rumor has it *They* even formed groups. Talk about your deadly cunning . . ."

"And?" asked the Small Fish expectantly.

"And what?"

"What did we do then?"

"Oh, we gradually adjusted. We learned to vanish the second *They* flipped into the water. We learned to hide in crevices a barnacle would have trouble getting a foot in. Yeh, we had to learn every trick in the book—and make up a few besides. Some took to pretending they were something else. Some preferred making a mad run for it. The bigger, nastier guys actually tried fighting it out with *Them*, for awhile."

"Gee!" whistled the Small Fish admiringly. "They really fought *Them*, face to face?"

"Why don't you *listen*?" said the Big Fish. "I said they *tried*. Sure, it was a real brave bit—but I never heard of anybody I know arguing with *Them* and living to brag about it."

"I was afraid of that," said the Small Fish dismally.

"And now *They* plunge in around us with those lousy cameras," said the Big Fish, bitterly. "Oh, I can see the handwriting on the reef, alrighty, alrighty! It'll be click-click here, and click-click there until *They've* driven most of us completely nutty. Then, *They'll* close in."

"With nets?"

"With nets," agreed the Big Fish.

"You want to know something?" said the Small Fish. "I don't mind those cameras at all!"

"You don't?"

"No, I rather enjoy having *Them* take all those pictures of me. Gosh, I even heard one of *Them* say he was taking color movies of little old me! Ain't *that* the catfish's peejeays! Me featured in color movies! Wonder if I'll make Wide-Screen?"

"Don't worry about it," advised the Big Fish.

"And the prospects of nets isn't a very—"

"Stop (gulp) worrying (gulp) about nets and all like (gulp) that," said the Big Fish, philosophically swallowing the Small Fish in three, philosophical gulps.

—Carl Kohler.



## NEWS CURRENT

**LAKE GEORGE, NEW YORK**—Ray Ciccarelli of Passaic, N.J., located an ancient anchor during a diving vacation at **Lake George**. The anchor has been dated over two centuries old by **Fort William Henry Museum** historian, **Thomas Lloyd**, which places it in the era of **Fort Ticonderoga's** shuffle between the **French, English, Iroquois** and **Algonquin Indians**. The anchor is now on display in the lobby of the **Passaic YMCA**.

**KENT, ENGLAND**—The **British Boy Scout Association** now has an underwater training camp at **Buckmore Hall, Rochester, Kent**. Training officer of the new camp is **J. C. Halligan**.

**NEW YORK, NEW YORK**—Recently arriving in this country aboard the **American Export** liner **Independence** was **Capt. Aldo Massarini** who is on his way to a new post as **Italian military attache** at **Ottawa, Canada**. A former frogman, he told dockside reporters that he sank a **13,000 ton Russian troopship** in **Sevastopol Harbor** in 1942.

**PROVINCETOWN, MASSACHUSETTS** — **Russell Watts** and **Austin L. Rose, Jr.** freed the largest vessel in the harbor just a few days after assisting a distressed fishing boat. The two divers were called to free the propeller of the excursion vessel **Boston Belle**, which had been held up more than an hour on its return to **Boston**. The excursion boat's prop had become entangled in heavy rope and it took the divers 45 minutes to free it.

**ANACAPA ISLAND, CALIFORNIA**—The **Ventura County Kelp Kats** diving club recovered mementos from the wreck of the paddlewheel steamer **Santa Maria** which sank off **Anacapa** in 1893. Club president **Norman Bunkowski** said there wasn't much left of the ship except for one of the old paddlewheels. The wreck is scattered over a 50 yard area in about 40 feet of water.

**SANTA ROSA, NEW MEXICO**—A trio of Texas divers, **Bill Sims**, **Gene Rutland** and **Bob Hollingsworth**, recently made a 250-foot descent into one of the lakes near **Santa Rosa**, establishing what is believed to be a record for inland lakes in the **United States**. **Hollingsworth** and **Rutland** used compressed air in making the dive while **Sims** used a gas mixture.

**ST. JOSEPH, MICHIGAN**—Police skin divers **Don Ives** and **John Nichols** helped recover a 15-foot steelbound wood shaft from the floor of **Lake Michigan**. The relic is believed to have been an anchor winch on a sailing ship.

**LAWRENCE, MASSACHUSETTS**—A \$2500 watch and ring are the objects of an underwater search of the **Shawsheen River**. Police called on divers for the search after a trio of youths admitted tossing the valuables into the river following a burglary.

**CLASSIFIED AD IN CALIFORNIA PAPER**—New slightly used skin diving equipment or one **Irish wife** 5'6", 120 lbs. 36-28-36. Can't keep both.

**VENICE, ITALY**—An entire city with graceful towers, palaces, a church and broad piazzas has been discovered underwater near **Venice**. The first team of divers explored the city, **Metamauco**, 30-50 ft. below the surface of the **Adriatic** under the direction of archaeologists. In the 1400's fishermen had reported seeing the city clearly underwater, but through the centuries it became just another name in dusty manuscripts until the current discovery.

**CRESCENT CITY, CALIFORNIA**—Two divers were fined \$250 by a **Crescent City** judge for taking abalone with scuba equipment. Commercial fishermen, they had taken 17 abalone when they were cited.

**ALBANY, NEW YORK**—A project to eliminate boating hazards in **Saratoga Lake** has been undertaken by several **Albany** skin divers, who plan to remove four or five of some abandoned railroad bridge pillings about 50 feet offshore.

**CANADA LAKE, NEW YORK**—Another underwater logging enterprise has been established. This one is in east central **New York**. In 45 days **Greg Ashlaw** and his partner hauled 30,000 feet of timber from the lake's bottom. The market price for hardwoods ranges from \$100 to \$150 per thousand and **Ashlaw** estimated the lake holds two or three million feet of timber. Stepping up operations **Ashlaw** now has a full crew and will be supplying furniture makers with lumber cut for them a half century ago.

**SYDNEY, AUSTRALIA**—The discovery by a skin diver of a second shrouded body in **Sydney** harbor led police to believe they were on the verge of uncovering an international ring engaged in smuggling **Chinese** into **Australia**. Another body had been discovered the previous day near the **Chinese** freighter **Taiyuan**. Police believed five **Chinese** were hiding on the freighter when customs agents boarded the ship and the smuggler leaders, fearing capture, flooded the bilges to kill the five **Chinese**. Divers are searching the harbor for three more bodies.

**BUFFALO, NEW YORK**—Police skin divers plan to search the **Buffalo River** and **Buffalo Harbor** for two missing trucks believed stolen and dumped into the river.

**SAN PEDRO, CALIFORNIA**—A 19-year-old skin diver, **Fred Lee Becker**, was treated for stab wounds in the emergency ward of a **San Pedro** hospital following an accident near **Abalone Cove**. **Becker** had his knife in his belt and accidentally stabbed himself when leaning over.

**PEEKSKILL, NEW YORK**—Governor **Nelson Rockefeller's** office issued congratulations to **Civil Defense** skin divers here for their active volunteer participation.

**WAKEFIELD, MASSACHUSETTS**—A hammer and hacksaw used by three young thugs in an assault on **Matthew P. Curran** were recovered by skin divers in **Crystal Lake**. Police are searching for the three youths who dumped **Curran** in the lake after they had been caught trying to seal an outboard motor. The assault victim regained consciousness in the cold water and returned to shore.

**POINT MUGU, CALIFORNIA**—Navy Lt. **David W. Offrell** and Warrant Officer **N. R. Carnder** saved the Navy \$60,000 when they recovered a drone target plane 18 miles off the **Pacific** coast. Helicopters lowered the two divers into the choppy seas for the recovery.

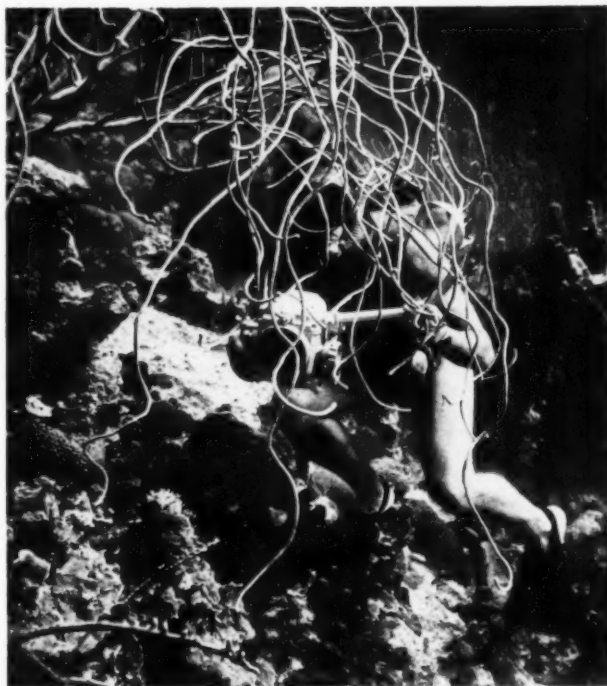


MELDRIM, GEORGIA—Skin divers probed the depths of the Ogeechee River for victims of the explosion that sent flaming butane gas cascading down a beach area recently. The tragic event took the lives of an unknown number of persons swimming and picnicking in the area.

DELRAY BEACH, FLORIDA—A 13-year-old skin diver, King Scherer, tangled with a 28-inch sand shark while looking for crawfish and wound up with 20 stitches in his arm. After he left the doctor's office, he raced more than a mile down the beach to get his shark.

ROCKPORT, MAINE—Harry Goodridge has a strange diving buddy, but an inseparable one. During a recent dive off Mark Island a seal took a liking to Goodridge and is now the idol of the neighborhood. "Markie" now dives with his master and other members of the Blue Flins diving club.

FIRE ISLAND, NEW YORK—The U.S.S. San Diego, a heavy armored cruiser trapped in the sand on the ocean floor off Fire Island for 41 years, since it was torpedoed and sunk by the German submarine U-156, may be salvaged. Findings of the two divers, Charles Smithline and John Lorel, will determine if the cruiser will be raised. The wreck contains large quantities of valuable metal.



Well-known subsurface lensman Hans Hass catches fellow diver-photographer taking pictures of him. —Rolleimarine Photo.

SANTA MONICA, CALIFORNIA—The U.S. Navy has warned the persons who replaced a marker of a dummy mine with two wine jugs that the marker contained deadly chemicals and explosives. When divers Bob Lorenz and Ed Fire returned to lift the dummy mine from the marker they discovered the wine jugs in its place. The Navy said the buoy contained enough explosives to rip off a hand and a container inside the marker held calcium phosphate which will burn upon contact with water and releases a cloud of deadly fumes.

ROCHESTER, NEW YORK—Prior to a large Marine "invasion" of Ontario Beach Park on July 25, Navy frogmen were called in to survey the beach. The day-long demonstration of Navy and Marine amphibious power was one of the largest fresh water operations on Lake Erie.

WOODS HOLE, MASSACHUSETTS—A trio of Navy divers has abandoned the search for an unidentified sunken plane near Nobska Bluff in Vineyard Sound. Navy authorities are considering the use of hardhat divers to find the craft which has been tentatively identified as a World War II type Navy fighter. The divers were unable to approach the craft at its estimated position because of stiff currents.

SONORA, CALIFORNIA—Four divers, Dick Haws, Guy Thro, Ed Davis and Brad Fregger, have rediscovered and charted the stalactite-filled underwater cavern which Jon Lindbergh discovered six years ago. The divers found three flashbulbs bobbing on the surface of a 40-foot diameter underwater lake, bulbs that Lindbergh had left when he photographed the scene years ago. The cave, possibly one of the largest of its type in the state, was reached through the tunnel 50 feet below the surface of flooded Bower Cave, seven miles from Bucks Meadows in Madera County. The group is planning an exploration of the caves and tunnels early in September.

LOS ANGELES, CALIFORNIA—Reports of a watch found in the stomach of a shark captured by Joe St. Denis off Catalina Island have turned into a hoax. St. Denis dreamed up the story after the shark attack incident off La Jolla recently and soaked broken watch parts in acid to add credibility to his story.

WINTER PARK, FLORIDA—J. W. Huggins and Jim Hulbert, using diving equipment, located and marked an underwater telephone cable for the Winter Park Telephone Co. The cable was in the path of a waterfront construction job and its discovery continued uninterrupted phone service to hundreds of persons in the area.

MARSHFIELD, WISCONSIN—Daniel Gallagher, 17-year-old skin diver, received leg and arm gashes when he tried to catch a "run-away" outboard motorboat. The boat swerved and tossed its occupant into the Big Eau Pleine River. Gallagher, who was standing on shore, swam out to the boat, hoping to board it, but was run down by the boat and hit by the propeller.

WINDSOR, ONTARIO, CANADA—A century old 1500 pound anchor has been discovered in Rondeau Bay near Erieau by Roy Gauthier and Phil Emery. The two divers located the anchor about a mile offshore while searching for an old sunken raft. The anchor was raised by a winch and was believed used on a large raft that sank while being towed from Rondeau Bay to Wheatley.

NEWARK, NEW JERSEY—Four divers plan a second trip into the waters off Cape Breton Island, Nova Scotia, Canada, for a French galleon loaded with several million dollars in gold. Tony Provenzano, William Robertson, Robert Kraft and Jack Malloy made an initial dive near Ft. Louisburg, Cape Breton Island, early this year and located two men-of-war on the bottom. A futile search didn't reveal the gold, but a second trip to the area has been planned for this year. The divers brought back cannon balls and other relics from the ancient ship.

TACOMA, WASHINGTON—With the aid of a fire hose, Jim Brown is blasting out old pilings stubs at McNeill Island's ferry slip. The worn out pilings are being removed because they have constituted a danger to ferry boats at low tide. On one of his dives, Brown came up with a ten-foot octopus which ended up in the cook's frying pan.

SOUTH BEND, INDIANA—St. Joseph County Civil Defense director Carrol Parfitt is compiling a register of skin divers in the county who would be available for emergency service with police units in the community. The move was prompted after Mishawaka police and sheriff's officers spent an hour seeking a skin diver to help find the body of a 13-year-old girl who was drowned in the St. Joseph River.

NEW YORK—A report from the New York Zoological Society revealed that skin divers using their underwater talents to nab beautiful specimens for salt water aquariums are capturing dangerous species. The Society lists the most dangerous of the fishes recently becoming available to fish fanciers is the Lion or Turkey Fish which, although beautiful, is toxic and should never be handled with the bare hands. There are many marine animals which produce poisons of one sort or another, and a new institution has been formed in Colton, California, which is studying various fish for their poisons, as well as a source of new antibiotics and other drugs.

WINDSOR, ONTARIO, CANADA—Divers in this area have added another warning device to keep boaters at their distance. In addition to the Divers Flag, the divers use a huge inner tube painted a bright yellow, as a marker and flagstaff.

SAN DIEGO, CALIFORNIA—Prince Victor Emmanuel, son of exiled King Umberto II of Italy, was placed in a recompression chamber aboard the Navy's submarine tender USS Nereus. The 22-year-old prince, stricken with air embolism while diving near Point Loma recently, remained in the chamber 18 hours.

## WORLD WIDE UNDERWATER PUBLICATIONS

### TRITON

16 Beverly Gardens  
London SW 13, England

Journal of the British Sub-Aqua Club  
Bi-Monthly, covers all aspects of the sport  
of underwater swimming, spearfishing tech-  
niques, safety, equipment, photography,  
plus reports from BSAC Branches.

6 Issues (1 Yr.) \$2.20

### L'AVENTURE SOUS-MARINE

11 Bis, Rue de Beaujolais  
Paris 1<sup>er</sup>, France

Monthly, European magazine for submarine  
hunters and divers. Published in French.  
Information, methods, archeology, under-  
water photography.

1 Year \$4.00

### DELPHIN

Buchholz bei Hamburg  
Germany

German Monthly Magazine, Swimming, Div-  
ing, Underwater Hunting, Underwater  
Photography and allied subjects. Peter  
Muller, Editor.

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# INSTRUCTOR'S CORNER

By NEAL HESS

Underwater Instructor  
Certified by Los Angeles County  
Training Director Boston YMCA Sea Rovers



Instructors take note: Mr. Hess is compiling  
a complete list of instructors throughout the  
country and requests that you send him your  
name, address and an outline of your skin  
and/or scuba instructor course.

Last month we started our discussion  
of first aid and found that we had  
barely scratched the surface when the  
space ran out. We were discussing over-  
exposure and now we might mention  
the very common difficulty of over-  
exhaustion.

A month or so ago, I brought two  
of my students to the ocean and found  
diving very difficult. Visibility was only  
six inches and the surge was very bad,  
as it is apt to be in Northern California.  
Instantly I was tired of diving, for I  
have been spoiled by the good diving  
waters of Southern California and the  
Caribbean. My students were in the  
ocean for the first time. I brought Jim  
Middlekauf down with me while Dick  
Johnston waited on the surface with  
our inner tube. We were down about  
ten minutes and Jim was doing very  
well. We returned and I took Dick  
below to show him the very murky  
world. After another ten minutes I was  
tired of the dreary dive and returned  
with Dick to the surface. I told them  
that they could dive together and I  
would follow them with the tube, feel-  
ing that they would be down for no  
more than ten minutes. Then, we could  
return to shore, eat a nice lunch and  
relax from the strenuous week at work.  
Five minutes went by, ten minutes wen  
by, fifteen minutes. Then I noticed  
their bubbles started for the breakers.  
I dived down to call them to the sur-  
face, which they did, and we went out  
another fifty yards or so. They wanted  
to dive some more in spite of the very  
poor visibility, so again I followed them  
with the tube and felt they would give  
up in a few minutes. When they were  
nearly out of air, the two returned to  
the surface, and we returned to the  
beach after forty minutes underwater in  
very murky water.

Both divers were tired, very tired.  
I realized for the first time in my life  
what diving holds for the newcomer.  
They were fascinated by the underwater  
world so much as to stay under when  
visibility was but six inches and the  
surge swept them over rocks. Now I

know why the new diver very often ex-  
periences the difficult situation of over-  
exposing himself. *THE WATER IS SO  
FASCINATING TO THE NEW  
DIVER THAT HE COMPLETELY  
FORGETS HIS ABILITY, AND IN  
MANY CASES REMAINS TO THE  
POINT OF NEAR EXHAUSTION.*  
We, as instructors, must guard against  
this situation and be ready to cope with  
it on all dives. The remedy for over-  
exhaustion is rest and warmth. The  
prevention is to guard against diving  
longer than your ability will allow,  
especially in cold waters.

Among some fairly common problems  
I have experienced is to have a new  
diver become sea sick while swimming  
on the surface of the ocean. The inner  
tube goes up and down, the surge  
moves the bottom away and then in a  
flash moves it back to within a few  
feet of the diver. For this reason I like  
to include some sea sickness pills in the  
first aid kit.

When diving was young we often  
found ourselves becoming a little sick  
with some air. Examination showed that  
we had not used the best of compressors  
or that we had used a gasoline com-  
pressor and had allowed the exhaust  
fumes from the engine to come back  
toward the air intake. We suffered a  
mild carbon dioxide poisoning. This  
can be prevented by obtaining air for  
your scuba equipment from a dealer  
who has had his air tested and certified  
as to content. The nitrogen content  
should be about 79 percent, the oxygen  
content should be at least 20.2 percent,  
but no more than 20.8 percent. The  
remainder of gas percentage in your air  
should be made up of rare gases.

The treatment for carbon dioxide poi-  
soning is to have the victim breathe  
fresh air again and to give artificial  
respiration if the victim has ceased  
breathing. Treatment for shock is in  
order and where possible breathing pure  
oxygen helps.

Next month we will start a feature  
in this column that we discussed in the  
first issue—that of featuring guest col-  
umnists. Mr. Milt Shares of the Roches-  
ter YMCA will write the column in  
order to give you, the reader, a diversity  
of ideas on instructing. ➤

## ONE MAN'S CAMERA . . .

(Continued from page 31)

contrast filter doesn't do an underwater print justice unless it has been taken in exceptionally clear water. Photographically speaking, Southern California water is not exceptionally clear.

I have tried Plus X and Tri X film. Of the two, I prefer Plus X. Its A.S.A. rating is 80, but this may be increased to 160 with compensated development and good results obtained. By using FR X 500 developer I did expose a role of Plus X at A.S.A. 320 and, although the negatives were a bit thin, I got passable prints.

Camera settings must be a compromise between the smallest F stop for depth of field and fastest shutter speed to stop constant motion of both diver and background. The camera should be operated to catch *peak* action. Panning is almost constant as action may occur at any moment in any direction. Because of this excess motion, special care should be taken to depress the shutter release lever smoothly and as steadily as possible. For sharpest all-around picture, both subject and background, fundamentals of photography apply. When the subject is moving to-

ward the camera, or away, the least motion is evident. Blurring increases as subject's angle of attack approaches 90 degrees from the camera lens.

Here are some film-developer combinations that I have used successfully:

*Developer—Ethol 90.*

Plus X A.S.A. 80. F 8 at 1/100. 1½ min. at 70 degrees.

Plus X A.S.A. 160. F 11 at 1/100. 3 min. at 70 degrees.

Tri X A.S.A. 400. F 16 at 1/200. 1½ min. at 70 degrees.

*Developer—FR X 500. Diluted 1:10*

Plus X A.S.A. 320. F 16 at 1/200. 10 min. at 70 degrees.

There are many more combinations possible, maybe some of you guys could tell us about them.

A quick way to evaluate a role of film after development is to make a contact print on a piece of 8 x 10 Kodabromide No. 5 paper of the entire roll and use it as a worksheet and guide for further enlargements.

There is a great deal more to be said about the use of various filters for both black-and-white and color films. Also about the use of artificial illumination (if you can keep it cheap, I'll try it). And certainly I haven't covered the subject extensively at all, leaving a lot of room for additions.

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## SCUBA DIVERS...

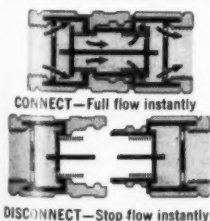
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"Miss New England Skin Diver" Judith O'Dowd (center) of Manchester, N.H., and her court, Margaret Blaney (left) and Elaine Girard, reigned at the Northeast Council Underwater Frolic. Miss O'Dowd entered the 1959 contest for the Miss New England Skin Diver title as Miss Aqua-Angels. Photo by Gerald F. Corneau.

## NORTHEAST NOTES



By  
**B. W. LUTHER, JR.**

Northeast Council  
of Skin Diving Clubs,  
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The Fairhaven Whalers sponsored a Seaside Fair in cooperation with the Northeast Council which held a two-day New England Open Tournament over the Fourth of July weekend. The location of the meet was Fort Phoenix, Fairhaven, where the divers were first asked to recover one of each different type of marine life found in these waters. This three-hour Saturday event was easy enough until the participating divers were told that they must also name the specimens returned. On hand was Colonel Eugene Clark, marine biologist from Sandwich, Mass., who sat in final judgment on the classification.

First place winner was Foster Thompson of the Fall River Aquamen. Second and third places went to Russ Bishop of the South Shore Sea Serpents and Norman Bruffee of the Semi-Panic Club of Middleboro.

The evening of the 4th was occupied by the divers and their families with the Underwater Frolic held in the ballroom overlooking the bay. Contestants for Miss New England Skin Diver were on hand at the dance, and final selection was made by the panel of judges. Miss Judy O'Dowd from the Aqua Angels of Manchester, New Hampshire, and sponsored by the New Hampshire Sea Skates, was chosen for the honor. Miss New England Skin Diver will reign over the Skin Divers Ball scheduled for September 19th at the Bradford Hotel, Boston.

Sunday morning two treasure hunts were scheduled; a scuba division and a snorkel division. Poker chips and children's glass marbles were seeded in the area. The undersea hunters really had to scour the rocky bottom to recover a sufficient amount to establish competition.

James Flynn and James Whitaker of the Semi-Panic Club recovered 49 among the sea growth to take first place, while the team of Robert Lanagan and Richard Perry of the Fairhaven Whalers qualified for second. Third place team was Russ Bishop and Paul Gullbrant of the South Shore Sea Serpents.

Also "seeded" in the area by the Council judges were many metal plates bearing the inscriptions which entitled the finders to

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equipment gifts. About half of the plates were recovered.

The fifth Council tournament in the 1959 season was held at Monument Beach, Bourne on Cape Cod, July 12th. Host club for this unusual spearfishing meet was the Semi-Panic Club. The divers were instructed at briefing that they had four hours to spearfish anywhere they wished. Trophies were awarded in three divisions—three top weights for tautog, flounder and any other "trash" fish. The largest tautog was speared by Peter Closen of the Fairhaven Whalers and weighed 6 lbs. 14 oz. Pete also took first place with the only flounder, 1 lb. 11 oz. Second place in the tight competition on tautog (blackfish) was taken by Russ Gore, South Shore Neptunes (his name keeps appearing all the time). Robert Lanagan of the Fairhaven Whalers returned with a 5 lb. 15 oz. fish for third place. There were no "trash" fish

speared. Everybody figured the "other guy" had a bigger shark!

I think a lesson was learned by everyone entering competition: when you are sent out for three articles, bring back three articles even if they are shiners!!

An old friend and past diving buddy, Ben Burgess, is starting a club in Boca Raton, Florida, and requests that any interested parties contact him through the police department or the Boca Marine Supply Co.

The Northeast Council has recently added the following clubs to its roster: Lewiston Auburn Divers Association, P. O. Box 121, Auburn, Maine; Central Maine Kelp Bugs, % Joseph's Clothing Store, Fairfield, Maine, and the Otis Fathomeers, % Cloyd T. Dunn, Box 2255, 962nd AFW & CONRON, Otis Air Force Base Mass.

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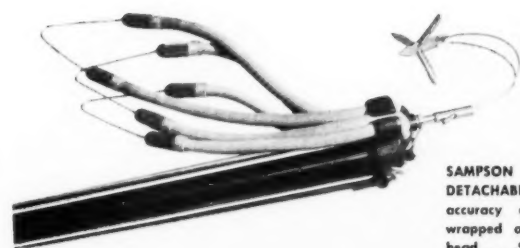
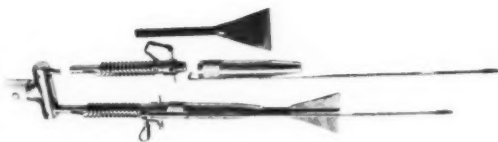
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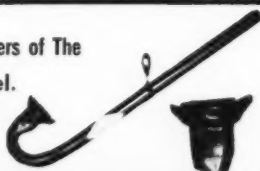
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## Connecticut . . .

**The Barrascubas—Madison—Reporter Stephen Schimmel**—The Barrascubas, a skin diving club that was organized in April at the Grove School in Madison, Connecticut, is progressing rapidly. Shortly after the club was formed, the school rented The Boys' Club pool in New Haven, Connecticut for elementary instruction. Arthur Satz, instructor and club adviser, used pool sessions to teach club members the fundamentals of skin diving and scuba.

Late in May, Mr. Satz felt that the members were sufficiently trained to dive in a small lake. The experience was highly successful!

On several occasions, the members go on vacation for two-week periods. Because of the opportunity for a member to dive during the school vacation, the club has recently decided to send letters to the parents of each member listing the rules and regulations of the club.

**Norwalk Skin Diving Club—Stamford—Reporter Gladys Johnson**—The second adult course in skin and scuba diving was completed at the YMCA and in late June nine neophyte divers were led through the murky yellow haze of a lake in Wilton where the trainees were put through mask clearing and other tests.

A total of 24 boys took the junior course and all passed with flying colors.

Besides participating in Connecticut Council meets, the Norwalk Skin Diving Club has had several spearfishing and scuba dives scheduled plus family outings.

### MOVING?

Be sure to send both your old and your new address to SDM so that next month's magazine will come straight to you without any delay. Second class matter can not be forwarded. Skin Diver Magazine, Lynwood, California.

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P.O. Box 165, Flushing 1, New York

By GENE PARKER

Johnson Road, RD #4  
Scotia, New York



water. Louis Smith felt the first minor shock as he grabbed an anchor off the reef. All three noticed that their muscles twitched with the shock.

The second jolt was much worse. A bright flash, like a big flash bulb, elicited a violent reaction from the divers, all of whom felt their arms and legs wrenched by sudden muscular contractions. They quickly climbed into their converted whale boat, "Iron Mike." Jack said they all vowed that they'd "keep one eye on the weather upstairs from now on."

#### Treasure Hunt

The Syracuse Aqua Kings, Inc., are holding their Annual Treasure Hunt on Sunday, September 13, 1959, at 12:00 noon at Lourdes Camp, Skaneateles Lake, New York. Lourdes Camp is located halfway down the east side of Skaneateles Lake near Borodino, New York. Just follow the signs to the Treasure Hunt.

The Treasure Hunt will be held under the auspices of the Empire State Underwater Council, Inc. Perpetual trophies will be awarded for both skin diving and scuba events. Also, individual trophies will be awarded by the Aqua Kings for first, second, and third place teams in each event. Entry fees will be \$2.50 per man. All entries, however, must be in teams of two. The entry fee will include free parking for divers and their families.

#### AAU Fund

Profit made on movie night netted \$205.00. Check was mailed to AAU to help send U.S. team to Malta, and acknowledgment has been received.

#### 1959 Empire State Team Standings

10 out of 18 teams listed: 1st—Long Island

(Continued Next Page)

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**110 Volt TRANSFORMER** to provide 24 Volt AC current for above compressor. **2150**

**HIGH PRESSURE AIR or OXYGEN TANKS**  
Of corrosion resistant steel ICC 3A 1800 Bottles Complete with standard oxygen valves.  
No. M530 - Size 5-1/2" x 18-1/2" - 22 cu. ft. capacity. Approx. 30 min. diving time. Palley price only . . . **1095**  
No. M532 - 6-3/4" x 19". Holds 38 cu. ft. Approx. 45 min. diving time. . . . **1495**

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**palley's** 2263 E. VERNON AVE., Dept. SD-99  
LOS ANGELES 58, CALIF.

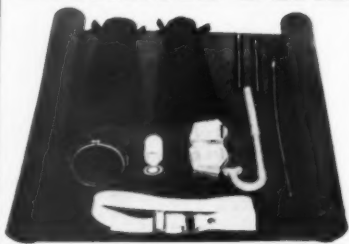
**NEW SOVEREIGN SKIN DIVERS WATCH**  
All new precision manufactured. Withstands pressure underwater up to 60 ft. Waterproof. Has a luminous dial marked off in 60 second increments. Sweep second hand. Stainless steel case and band. **SPECIAL at ONLY 1488**

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A—British Army comb. PICK-HOE TOOL \$1.49  
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C—Navy FIGHTING KNIFE . . . . . 2.98  
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E—22" Vanadium Steel MACHETE - comes with case for belt . . . . . 1.98  
F—G.I. PICKMATTOCK with 12" steel head. Has pick and mattock. **NOW Only . . . 1.29**

**SAVE 12 PC. CAMP KIT ONLY 588**  
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Dolphins, Herb Rakebrand, Dick Ferg, Frank Perez, 564 points; 2nd—Manhattan Skin Divers, Manas Miller, Mel Malaxos, Phil Shapkin, 441 points; 3rd—Long Island Skin Divers, Tom Lindtviit, Ed Harrison, Paul Nielsen, 356 points; 4th—Long Island Sea Horses, Norm Whitman, Wallace Harman, Louis Martinez, 274 points; 5th—Atlantic Stripers, Frank Kabelka, Eddie Ortiz, Guy D'Auguste, 250 points; 6th—Long Island Dolphins, Graham Snediker, Don Ferrin, Roy Kieser, 238 points; 7th—Long Island Dolphins, Wm. Kaufman, Gerald Beacom, Robert Roth, 180 points; 8th—Long Island Dolphins, Bob Kulpa, Mel Small, Guy Freeman, 160 points; 9th—All American Skin Divers, Alan Iscoe, Stuart Sup, Geo. Nabagewski, 130 points; 10th—Suffolk Submariners, Charles Jehle, James Emerson, Carl Pierce, 112 points.

Largest Individual Fish, a 10 lb. 12 oz. blackfish, was taken by Herb Rakebrand, Long Island Dolphins.

### Overloaded Boat=Death

Don and Doris Shearer and Don and Verna Ferrin were eating lunch at the Shearer's lake-side camp at Lake George. Out on Gull Island, a quarter-mile away, kids started screaming and leaping around.

Both Dons piled into Shearer's speedboat and raced out to Gull Island. Dale Phal, a neighbor, had reached the scene and recovered the body of a young man from shallow water. Ferrin dived 30 feet and brought up an older man. Mouth-to-mouth resuscitation failed as the men had been underwater too long. The small boat had swamped under an overload of two adults and several children.

### Unusual "Historical" Recovery

Len Jones had just finished an excellent talk on skin diving to the Lake George Power Squadron. The squadron commander brought

out an ancient dog-eared chart and showed it to Len. The map gave the location of an old sunken ship reputedly containing valuable cargo. Coincidentally the location was adjacent to Assembly Point, where the Power Squadron was assembled.

Jones dived on the spot and recovered a crumbling chest. Everyone crowded around as the chest was broken open. Laughter greeted the disclosure of the contents. The chest contained a very fancy pair of lace panties. The chest had been planted, on the bottom, as a joke on Jones.

**The Empire State Rescue Squad Inc.—Poughkeepsie—Reporter George Leavitt Jr.**—We are a new diving and rescue organization. During the winter our training committee instructed approximately thirty members in two 8-week scuba courses. On May 16 these two classes had their final exams at the bottom of Sylvan Lake.

The following weekend we participated in the Treasure Hunt at Sylvan Lake hosted by the Dutchess Divers. Our team took fourth place. Richard Lott and William Brandt took individual trophies in skin diving and cubic diving. We have set up dives at Sylvan Lake for every Tuesday evening. Any divers in the area are welcome to join us.

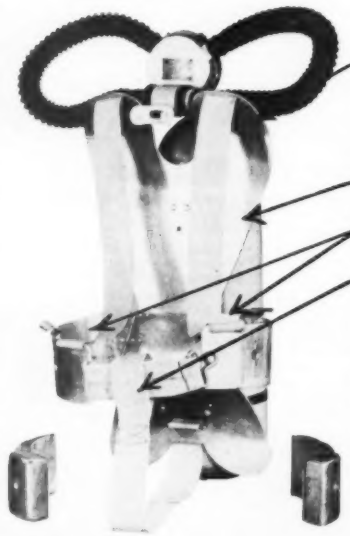
Our rescue squad has been called twice in the last month to search for drowning victims. The first time we were called we were successful in locating the body, but on the second call we arrived after the body had been recovered.

A training class is in operation at the YWCA. Anyone interested in becoming a member can contact George Leavitt, 36 Skyview Drive, Poughkeepsie.

(Continued Next Page)

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**Central Seals, Inc.—Jamaica—Reporter Ran-**  
**dolph C. Wilson**—I would like to take this  
opportunity to announce the forming of the  
Central Seals Inc., Skin and Scuba Club at the  
Central Queens Y.M.C.A., Jamaica, Queens,  
New York.

We would like to correspond with other  
diving clubs throughout the country. This  
will enable us to exchange ideas on diving  
techniques and equipment. Our club is also  
interested in locating new places for diving  
along the eastern seaboard. We are members  
of the Empire State Underwater Council.

Please address your correspondence to  
Randolph C. Wilson, 110-48 63rd Drive, For-  
est Hills 75, New York.

**Club Sous-Marin of Long Island—Hollis—**  
**Reporter Frederick P. Schmitt**—Club Sous-  
Marin of Long Island is currently engaged in  
many projects concerned with undersea  
research and exploration. We are compiling  
a pamphlet about a famous British man-of-  
war and the publication of this booklet in  
September, we hope, will be the beginning of  
a series. In addition we are doing undersea  
research of a historical nature in the Eastern  
Long Island area. Others in our organization  
are conducting electronic and scientific ex-  
perimentation with undersea detection equip-  
ment, while one member, a technician with  
American Telephone & Telegraph Company,  
is busily perfecting a one-man submarine. We  
have a graduate chemist in our group who is  
conducting tests and analyzing various objects,  
such as cannon balls, metal parts, etc. which  
we have salvaged on our field trips. He is  
currently conducting tests on an ancient fire-  
bomb found in the Long Island area.

Unfortunately, during the infancy of our  
club we had two or three individuals who  
joined with the conception that we had  
formed a "skin diving-spearfishing" club, and  
were rather disappointed with our serious pro-  
grams. One of these members still has some  
of our discontinued stationery and other  
materials. We have now received reports that  
these people are using our name to obtain in-  
formation and films.

These people only are authorized to conduct  
correspondence for our organization: Freder-  
ick P. Schmitt, Steve Cohen, Donald E.  
Schmidt, Neil A. J. Nisita, George Schiller, Jr.  
Correspondence under the name Club Sous-  
Marin of Long Island from any individuals  
other than those named above should be  
ignored, as we will accept no responsibility  
for such communications.

**Aqua-Gators—Pearl River—Reporter Larry**  
**Critchlow**—The club of Rockland County,  
New York, recently elected officers. They are  
Tony Kasper, president; Dick Van Zandt,  
vice-president; Larry Critchlow, secretary, and  
Harry Barnett, treasurer.

New members are welcome and instruction  
is available for novices. Contact the secretary  
at 55 E. Central Ave., Pearl River, N.Y.

**All American Skin Divers—Rego Park—**  
**Reporter Alan Iscoe**—Besides a great number  
of outings the club has been quite active in  
group demonstrations with shows in pools  
and three lectures by members. Future dates  
include more of each.

Club photographer Harry Kollmer broke  
up the Empire State Council meeting with his  
excellent film of the New York spearfishing  
eliminations. Those at the contest saw no  
elaborate picture-making and when the film  
was presented with narration and music there  
was much head scratching. The secret, of  
course, was a synchronized tape.

The club continues to meet Wednesdays,  
8 p.m. at the L.I.C. Athletic Club, 31-74 43  
St., Astoria, L.I. (off Broadway).

**SKIN DIVER—September 1959**

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By JOHN J. McANIFF  
184 Bellevue Ave.  
Newport, R. I.

## RHODE ISLAND COUNCIL REPORTS

The third major spearfishing competition in Rhode Island waters this year was held on July 19th at the Sachuest Point Naval Reservation, Newport, R. I. Divers from all over the state entered in the second annual Rhode Island Individual Spearfishing Championships.

By 1 p.m., the starting time of the meet, all contestants were suited and ready for the two hours of competition in a very high run of surf, driven by 20 to 25 mile an hour winds. By the 3 p.m. ending of the meet, even the spectators were a bit chilled by the wind and many cups of the caterer's coffee were consumed.

Within fifteen minutes of the beginning of the competition one of Rhode Island's well-known divers from the Narragansett Spearfishing Club came up with a 33-pound striped bass, which was ultimately held to be the largest fish of the day and the only striper taken. Donald Bibeau of Cranston, R. I. was the lucky boy with this catch and also took second place in the day's event.

Individual divers from the Newport Underwater Sportsmen did very well in this competition, taking two of the first three awards. John Jagschitz came in with top honors of the day with 134 points, the highest individual number of points attained by a single diver in any of this year's events in Rhode Island. Third place went to Ed Bradbury, also of the Newport Underwater Sportsmen Club. Both of the Newport men are members of this year's third place Championship team in the Atlantic Northeast Regional Competition.

It is with deep and sincere regret that this next item is passed across this desk. We have just received a call from the secretary of the Long Island Dolphins, whose three-man team of Perez, Ferg and Rakebrand was to go on to this year's National and International Competitions after winning first place in the Atlantic Northeast Regional Championships on June 21st. One member of this team, Dick Ferg, disappeared while searching for anchors in an area off Breezy Point near Sheepshead. At last report, the body had not yet been recovered. We are in hopes that a more complete report on this accident will be forthcoming shortly. The deepest sympathy of all members of the Rhode Island Council goes forth to Mrs. Ferg and Dick's family.

Rhode Island now has an emergency diver program completed and under way through the cooperation of the many clubs in the R. I. Council. Copies of the program will be sent out shortly to all interested parties in the state. This interim program has provided a systematic call system throughout the state which will be available to all fire, police and other civil agencies in need of emergency diving services. All of the divers listed are volunteers and have agreed to serve in that capacity until the many rescue squads in the state have properly trained personnel. The second half of this program is one of training, which is also being supplied through the R. I. Council of Skin Diving Clubs and

(Continued Next Page)

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first powerful light  
designed 100% for use  
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all of its member clubs, and will be made similarly available to all rescue units in the state very shortly.

Divers of Rhode Island, remember, this is YOUR column. Please feel free to contact me by mail or phone at any time. I will attempt to answer all your inquiries as quickly as possible. Are you looking for a club to join?—information on diving areas?—air refills?—etc. Contact me at the above address.

## Texas . . .

**Almeda Diver's Association—Reporter Rose Blaker**—We've had quite a bit of action lately in so far as spearfishing contests are concerned. Two teams of three men each competed in the Gulf Coast Regional Elimination Meet at Grand Isle, La. The best we could do was third place, but getting to dive in some clear water for a change was well worth the trip. The teams were composed of Mack Blaker, Floyd Parker and Maxie Wilbanks on one team and Ronnie Caffey, Roland Garner and George Herrera on the other. Even though this was the first A.A.U. meet held in the Gulf Coast region, it was a very well organized meet thanks to the competent managing of Dick Alba of the Dixie Divers in New Orleans, La.

The same weekend, Troy Nolan and Ebb Berry III entered the scuba contest at Possum Kingdom Lake. The most eventful thing that has happened to the club this year was the purchase of our new air compressor. We are now contemplating the purchase of a 16mm movie projector as most of our monthly dues are now being used for the rental of one.

**San Antonio Underwater Club—Reporter Peggy Marie Walker**—Even hurricane Beulah couldn't stop us this time! The weekend of June 20-21, SAUC divers trekked down to Port Aransas, on the Gulf Coast, en masse. We hardly dared hope for the kind of weather and water we had! "Beulah" kicked up just enough fuss to drive the blue water inshore, and we enjoyed the best diving we've had on the coast in ages! Happily, this trip really paid off.

Luke Lowery's folks were good enough to turn their beach house over to the club for the weekend, so we could all bunk together and fix meals, and keep expenses down.

Kirby Turner, SAUC's youngest (he is 12) spear his first fish, an angelfish and one bluefin! Some of the other divers tied into same "grande" jewfish out at the drilling rig, while others explored the channel for live horse-conchs.

E. Mack Wilson is the newly elected president of the club, as per a special election held last month. Luke Lowery is our new recording secretary, and Kirby Turner will sit in as a non-executive member of the Board of Directors.

## Georgia . . .

**Moody Aqua Gators—Moody A.F.B.—Reporter Nels Nelson**—One of our club members, Robert Small, was nominated for the Georgia State Skin Divers Association "skin diver of the year" award for his work in searching for a downed aircraft and its pilot. He was named runner-up by the association.

The club has made several trips to nearby springs and the Gulf area and also competed in the Georgia Invitational Meet at Morrison Springs, Florida.

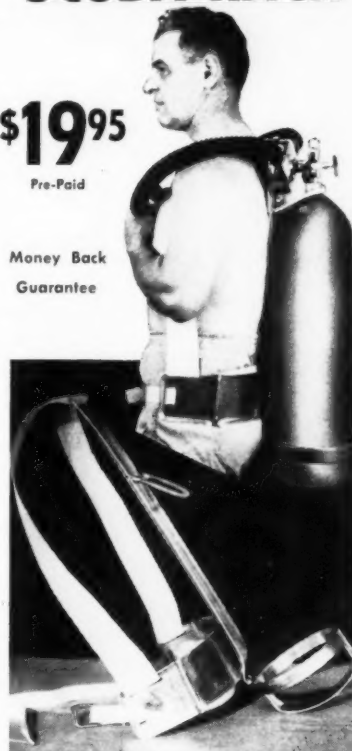
We had a display at the Armed Forces Day show on the base. Among the gear displayed was the Divers Flag and a poster explaining its meaning. Several thousand persons viewed the display.

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Experienced Divers with Years of  
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## SAFETY . . .

You can shed your gear in two seconds, a jerk at the buckle and the complete tank unit is off with little effort. Golden yellow for easy visibility in the depths. Made of aircraft type corrosion resistant anodized aluminum, you are sure of the rack holding up under strenuous conditions. It will add safety in the water, will not interfere with a diver's pattern of swimming.

## AND NO ADJUSTMENTS . . .

Designed and built to fit a person (from 100 pounds to 250 pounds) without any adjustment. Tank can be slipped in and out of the harness easily, there are no bolts or screws to secure it.

## EASY STORAGE AND PROTECTION FOR YOUR GEAR . . .

Mask is put in the cup assuring adequate protection for the face plate against mares and damage. Fins can be inserted under shock-card thereby providing minimum storage space for gear.

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## ATLANTIC SKIN DIVING COUNCIL

By C. K. "RUSTY" SHERRILL  
4104 33rd Street South  
Arlington 6, Virginia



The biggest news in the Atlantic Skin Diving Council is its membership in the Underwater Society of America. ASDC is happy to be a member and will certainly lend its full support to all of the efforts of the USA to make it a successful organization.

All Council members are urged to make plans now to attend the annual general meeting of the Council to be held September 8, 1959. The meeting will begin at 8:00 p.m. at 1515 L Street, N.W., Washington, D. C. An interesting evening is planned, which will include a guest speaker, slide show, and a color underwater film. Election of new officers for 1960 will be one of the many important items of business on the agenda.

Hats off to the Flipper Dippers and the Annandale Skin Diving Club who through the efforts of George Hurley and Jim Slater have been checking new diving sites for the Council. Armed with maps and equipment the members have racked up many miles in the fruitful search for new diving areas.

A crew from the Atlantis Rangers headed by Melba and Dick Seron embarked on July 15 for one week of diving on the three mile reef at Marathon, Florida.

The National Institute of Skin Diving Technology held its annual meeting for the election of officers on July 7 at 1127 Peyton-Randolph Drive, Falls Church, Virginia. The president's slot went to John Kominski with Richard Thomas taking the secretarial position. John O'Keefe, Jr. was elected treasurer and Charles Waterhouse safety officer. Persons interested in contacting this club may write the secretary at 1943 S. Arlington Ridge Road, Arlington, Virginia.

Wrecks! Wrecks! Wrecks! Members of the Council are at it again this year. Seems like every weekend some members leave for Ocean City, Maryland, to visit the wrecks on Fenwick Shoals. Members report that visibility is excellent and some of those fish stories—well, maybe.

Another welcome addition to the ASDC's growing list of available bulletins is an under-

water photography technical bulletin written by C. K. (Rusty) Sherrill and John Stewart, Jr. This bulletin was written especially for areas where visibility is limited (10 to 40 feet) and contains complete information on selection of film, exposure, processing, etc.



Mary Zellner

Miss Mary Zellner won the title of "Miss Pioneer Skin Diver." Contestants were judged on their beauty, poise, and ability as skin divers. Mary is a former employee of Weeki Wachee Springs, Florida, where she performed in underwater shows at depths from 10 to 74 feet using a free flowing hose for breathing.

The Maryland Underwater Explorers continue to lead the affiliated clubs in equipping members with club jackets. Under the leadership of Fred Willcutt this newly formed club has certainly jumped forward and is one of the most active in the Council. For information on this club write P.O. Box 721, Rockville, Maryland.

The Atlantic Skin Diving Council will be delighted to assist any diver vacationing in the Maryland, Virginia, Washington, D.C. area. Just drop a card to the Council giving the date of your visit, and every effort will be made to include you in the diving activities of this area.



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## California . . .

**Kelpomania**—Los Angeles—Reporter Sylvester Seaweed—In mid-June Cliff Dietsch, Harold Hansen, Keith Lumsden and Roy Salls made a trip to Guaymas, Mexico. The Gulf was warm but dirty, an excess of plankton causing 15-foot visibility. We saw some 20- to 30-foot long sharks close to shore. We were so worried about sharks that my brother-in-law put on his shoes without looking into them and there was a scorpion in one of them!

The boys spent about ten weekends building big spearguns and on the first day at Guaymas a big swell knocked them overboard into 60 feet of water. They spent four days searching but to no avail.

Some big grouper were taken but the giants of yesteryear were nowhere to be seen. Keith about summed it up when he was gathering clams. "We drove 1,000 miles to dig clams."

**Sonoma County Reef Runners Inc.**—Santa Rosa—Reporter Al Hart—Our fine team of Dick McCandless, Mit Tufts, Bill Brown and Al Johnson took seventh place at the Pacific Coast Championships at Catalina. Sport and Boat show participation plus diving meets have upped our membership to over 60 diving members and three dolls, the largest club of active divers in northern California.

We have been chosen to host the Central California Diving Championship next year at Fort Ross. A meet at Fort Ross will be held by the club on September 13. There will be trophies, prizes and terrific spearfishing at this individual diver meet and all divers are invited to compete.

We meet the second Wednesday of each month at Franklin Park Club House, Santa Rosa. For more info call Al Hart LI 5-1381.

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**By Bill Skripko**  
22 Roosevelt Street  
Laurence Harbor, N. J.

Two new clubs were accepted into the Council at the June meeting, they are the "Clifton Aqua Divers" and the "Piranhas." We welcome them aboard and sincerely hope that other unattached clubs in the state will follow suit and join in making the Council as statewide an organization as possible.

In order to provide some means of recovery of lost or stolen equipment, the Council is setting up an equipment registration system for Jersey divers. If you want to register your equipment with the Council just write the serial numbers of your regulator and tank block, or other equipment on a post card, get a buddy to witness it, and send it to me. In the event someone finds lost equipment this will give them some means of returning it. Air stations will be given a list of serial numbers of stolen equipment and will be asked to be on the lookout for it.

Skin Diver Magazine's request for this reporter's picture, and its approval by the Council marks the biggest loss of prestige for the NJCofDC in its history. This testifies

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**VOL. 1  
NO. 2**

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to the fact anyone can make a mistake. A glance at the picture will show the tragic consequences of such a mistake. The only thing I can say to them is, "You Asked For It."

The Divers Flag is virtually unknown to boaters in this state. The Council feels that individual clubs can publicize and distribute Diver's Flag posters much better in their own area than can the Council, and urges them to initiate some program to accomplish this important task.

A new piece of equipment has been added to divers' gear in the past two weeks, a bucket of gasoline. The collision of two tankers off the Jersey coast caused a coat of tar to spread over miles of coastline. This is a serious setback, coming at the height of the striped sea bass season. Although a few strippers are filtering through the area, the majority seem to have left for better waters. Divers and equipment leave the water covered with tar, so there is plenty to do while waiting for the strippers to return.

**Freehold Sand Sharks—Freehold—Reporter Karl Stutzman**—Our club is growing slowly but surely with a membership of 15 interested divers. We have been working hard to get the club boat (the Sand Shark) into action.

James Hawthorne and I have been diving in the larger tank at Asbury Park Marineland which houses twelve medium sized sand sharks, two sturgeons and many other interesting local salt water fish. The three large

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sea turtles in the aquarium are always interesting to watch and fun to ride.

Newly elected officers of the club are president, Karl Stutzman; vice president, James Hawthorne; treasurer, Benjamin Pogue, Jr., and secretary, Ronald Rupprecht.

**Springfield Skin Divers—Mountainside—Reporter Brad Crosby**—We are the first all teenage skin diving club in New Jersey. Our club meets every Monday afternoon in Jonathan Dayton regional high school in Springfield.

We have prepared a test to learn how much each member knows about diving. Although none of the members own scuba equipment, they are expected to know about its use and operation.

## Illinois . . .

**Atlantis Divers—La Grange—Reporter L. E. Hoadley**—Atlantis Divers has been in existence somewhat over two years as an organization of skin and scuba diver members of the West Suburban YMCA in LaGrange, Illinois. Our purpose, in addition to enjoying the good fellowship of our country's fastest growing sport, is to promote and encourage safe diving through public information and instruction of student divers.

Under the auspices of the "Y" we have developed an eight-week course of instruction in which we take, justifiably we think, great pride. Each weekly lesson embodies a one-hour classroom session, one and one-half hours of pool instruction with all equipment furnished, followed by a half-hour informal session where refreshments are served and individual problems are discussed. Four courses per year are offered and these are limited to twenty-five students, enabling us to provide one instructor in the water, one at pool-side, and one scuba unit for every two students.

In addition to various published texts, we have developed our own lesson plan which has been adopted by the Chicago Metropolitan YMCA Sports Council as the standard of YMCA instruction in this area. The same lesson plan will soon be considered for adoption by the National Council. Along these same lines, we have provided the instructor training to establish courses in various Y's in the midwest, and are currently functioning in this capacity at the new High Ridge YMCA on Chicago's modern Northwest side.

This spring Atlantis Divers inaugurated their first long-distance expedition in search of new diving waters . . . a group trip to Grand Bahama Island attended by sixty-four members and friends, planned and executed entirely by club members, spearheaded by Ernest W. Glenesk.

## Kentucky . . .

**Mermen of Kentucky—Lexington—Reporter Estill Lyons**—A Water Safety Show was presented by the "Mermen" at the Blue Grass Sportsmen League Lake. We demonstrated: swimming and non-swimming rescues, improvised equipment that could be used, survival swimming, resuscitation, rowboats, water skiing, scuba diving, and safe boating.

We had a United States Coast Guard representative present, who commented on "the rules of the road," and the new law that goes into effect April 1, 1960. The Coast Guard furnished pamphlets for distribution to all. The National Guard furnished searchlights and other lighting equipment.

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## WASHINGTON COUNCIL OF SKIN DIVING CLUBS

By Richard Klein  
18622 26th West  
Aldewood Manor, Washington

Welcome to our newest members, the Bluefins of Seattle and the Edmonds Diving Club. The United States was well represented at the Victoria Skin Divers Spearfishing Meet on July 12. The teams were the Mudsharks,



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Scubaneers, Nemgorf, and Everett Sounders. One hundred divers competed in the events which consisted of a spearfishing contest, a treasure hunt and a paddle board race in water that was anything but calm.

The home team won the spearfishing contest with the Mudsharks taking second and third place. Jim Blanchard, diving for the Everett Sounders, speared the largest fish. The treasure hunt was won by John Tallman of the Mudsharks.

### N.U.R.G.

Lou and Jim Whittaker, members of our recovery squad, were called out Sunday, July 5, to locate the body of Frank A. Peterson, 44, who drowned when the 12-foot outboard boat he was piloting flipped over on Lake Sammamish. A companion, Frank E. Westover, was rescued.

Lou Whittaker located the body in 60 feet of water, lying face down in the mud. Lou first found a rod and reel and a thermos jug, then the body. He was unable to bring the body to the surface with his weight belt on, so had to release it.

We arranged to screen Captain J.-Y. Cousteau's movie "Silent World" at the Ridgemont Theater on Sunday, August 16th at 4 p.m. Also on the same program was "Along the Great Barrier Reef" a color movie showing the marine life on the largest coral reef in the world.

### KING COUNTY SHERIFF'S DIVERS

The body of Ron Sargeon, age 13, was recovered by Vim Vey in Pine Lake. Ron drowned while swimming alone and without his parents' consent. The body of Gerald Jones, age 12, was recovered from Lake Washington by Chuck Fendrych and Joe Dollinger. Gerald was swimming with companions at a public beach with a lifeguard on duty, and his disappearance was not noticed until the boy's father came to take Gerald and his friends home. Sheriff's divers were called at 11:00 p.m. and the body was recovered from 20 feet of water.

The drowning of these two young boys stresses the importance not only of teaching our children to swim but also the importance of using the buddy system.

(Continued Next Page)

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## PUGET SOUND MUDSHARKS

The Puget Sound Mudsharks held their annual dance June 26th. It was a combination splash-party and dance.



Pat McDaniels

We're all proud of Pat McDaniels, who had the honor to be selected to dive in the eliminations for the team to go to the World Championships. Pat, who is only 19, attends the University of Washington on a swimming scholarship. He has been an active member of the club for three years, and holds the local record for several catches, as well as the world's record for the giant marbled sculpin.

Five Mudshark teams attended the Second Annual Victoria Meet, in British Columbia. The meet was a combination spearfishing, paddle board race and treasure hunt. Placing second and third in the spearfishing event and first place in the treasure hunt was John Tallman winning a new paddle board.

Gary Crymes received the monthly boo-boo award for spearing a dead shark before realizing its condition.

**Spokane Skin Divers—Reporter Lemuel Hutchings**—Summer is here and the Spokane Skin Divers are diving every weekend at the lakes around the inland empire. Scrap fish are becoming more plentiful as the water temperature rises.

The Spokane Skin Divers sent two teams to the Pacific Northwest Regional Spearfishing Meet in the San Juan Islands. Diving in salt water was a new experience for one team, but they seemed to like it. The plant and animal life was very different from what we see in our inland lakes.

On the calendar of events for the club members, who are on the Civil Defense diving team, this summer are the Diamond Cup and the Hydroplane Races at Lake Coeur d'Alene. Also the annual club meet and the A. A. U. meet. So this looks as if it will be an active year for the Spokane Skin Divers.

## New Mexico . . .

**L'Adventurers of Le Monde du Silence—Lovington—Reporter Milo Jurik**—We have formed a diving club in this waterless town of Lovington, New Mexico. Our nearest diving is at the bottomless lakes near Roswell. We would like to correspond with other clubs.

**SKIN DIVER—September 1959**

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By: Joe Birkbeck

412 Harrington Road  
Havertown, Pennsylvania

Spring and early summer has found the MAUC a beehive of activity. The newly elected officers began feeding new ideas into the Council by adopting a new constitution, setting up the regional chairmen in their respective locations and receiving reports from same.

Summer again brought with it the problems of anti-skin diving legislative action—a ban on diving near Barnegat Lighthouse, which has yet to completely resolve itself. More recently, Pennsylvania Secretary of Forests and Water, Maurice K. Goddard, has announced "Snorkels and underwater breathing devices are banned in State Park lakes." Mr. Goddard said, "The regulation is designed to reduce boating and swimming accidents." All such anti-diving activities fall under the committee of the M.A.U.C. and will have to be corrected.

The M.A.U.C. held its annual Individual Spearfishing Contest at Lewes, Del. Water conditions were poor. The winners were as follows: first, Kenny Stark—Tidewater Skin Divers; second, Gordon Groves—Maryland Waterbugs; third, Charles Riegel—Abington Sub-marines; 4th, George Feehley—Ocean City Divers. Largest fish of the day was caught by the Maryland Waterbugs' ace spearman, Gordon Groves. Inter-club team competition will be held on July 13, again at Lewes.

**Underwater Explorers Club—Curt Yeske—**  
In spite of what may have seemed adverse diving weather, the Underwater Explorers Club had a creditable winter of diving and club activities.

One of the highlights was a citation that the club received from the Olney Kiwanis Club. At our newly instituted annual dinner dance, the officers elected for the coming year were installed. We had three under-ice quarry dives as part of our training program, had eleven representatives at the USA convention in Boston, and had Don Kenley and Charles Vogt elected to MAUC offices.

The club has four offshore diving dates planned for this summer as well as plans to participate in the regular MAUC activities and other recognized competitions.

**Delco Diving Club—Vaughn Nickerson—**  
On June 8th, Dr. Kirker of Temple University and author of a column in Skin Diver Magazine, spoke to the club at the Y.M.C.A. His subject of "Diseases Related to Diving" was extremely interesting. He showed many slides of techniques used in Navy diving and answered questions for everyone.

The Delco Club had two qualification dives at Avondale. A real surprise of the day was Bill Linaberry's descent to 85 ft. and being disappointed the quarry wasn't deeper.

On July 12, a treasure-seeking venture was undertaken by Ray Bladgett, Bill Cox, Basil Gaglia, Fred Miller, Chester Haven and Bill Ward in Lake George, New York. Bill Cox is going on a trip to the Florida Keys, and

(Continued Next Page)

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Vaughn Nielson is going to Southern Nova Scotia to try his luck in the deep.

**Philadelphia Sea Horses—Ken Gilletly—**Divers from the Philadelphia Sea Horses will start diving operations off the coast of New Jersey in an attempt to solve the mystery of the Debbie Sue, a clamming boat that sank 18 months ago under unusual circumstances.

Their objective will be to establish the cause of the sinking, find out what happened to the lifeboat, and look for the remains of the three men aboard at the time of the sinking. There have been several attempts by other divers to reach the Debbie Sue and all have met with failure.

**Main Line Divers—H. S. Redeker—**The Main Line Divers have announced the establishment of an air station at the Main Line Y.M.C.A. in Ardmore.

Divers are requested to check in at the main desk for instructions before carrying tanks into the Y.

**Philadelphia Depth Chargers—Mary Pokropski—**The diving season is well under way and the Depth Chargers are going at it full-fledged. Two qualification dives have enabled our novice divers to start the diving season fullfledged. The film "Silent World" was a tremendous success, so much so that in the near future we hope to see it again.

The club boasts many new members. Most surprising are the feminine members. The gals are really going in (the water), snorkel, mask, and fins.

The weekend of July 18th saw a concerted effort by the Depth Chargers to recover artifacts of the famous British attempt to capture Fort Ticonderoga. The expedition was planned by our president, Joe Birkbeck and Dr. Oscar Cataldi.

**Pittsburgh Scuba Divers—Jack Mountford—**The club has been very active all year but particularly so since the summer weather arrived. We have club dives scheduled for every weekend. Recently the club was at the Blue Hole near Altoona and we found another lake on the way home which we have named Blue Hole #2.

Unless the plans are changed, the Pittsburgh Scuba Divers will be on water safety patrol every Sunday during July and August at the intersection of our three rivers.

I should like to extend to all diving clubs an invitation to come and dive with us any weekend. We have purchased a large compressor and have unlimited air available.

**New Castle Dolphins—Reporter Donna Terpilowski.** On June 27 we demonstrated the major points of diving to 150 awed and enthusiastic senior boy scouts at Pymatuning Reservoir, Jamestown, Pa. Recently club members were called upon to recover the body of a 16-year-old youth from the Shenango River. Although not successful, useful experience was gained in battling the swift current and muddy water. Our diving activities are seriously hampered by distance from Lake Erie which is the only interesting body of water within one hundred miles.

## New Hampshire . . .

**Yankee Tankers—Laconia—Reporter Lucette Keene—**We are a new club here in the New Hampshire lakes region and meet every Tuesday night at 7 p.m. at Divers Supply on Weirs Blvd. We have a membership of 25 and are growing every week.

Our officers are Jack Farrington, president; Arthur Tilton, vice president; Tom Keene, safety chairman; Jim Tyler, publicity; Eddy Cross, program; Jack Lee, membership; Chick Farrington, recording secretary, and Lucette Keene, corresponding secretary.

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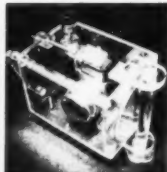
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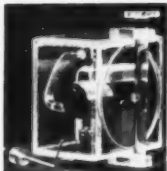
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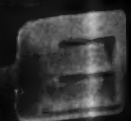
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SKIN DIVER—September 1959

## SOUTHEAST COUNCIL OF SKIN DIVING CLUBS

by Bud Cox

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A noted Southeast Council skin diver drowned recently in a rockpit while practicing alone for the elimination test to determine the team to represent the United States at the 1959 International championships at Malta. Alan M. Riddle, 25, captain of the Miami Spearmen, disappeared in a South Miami rockpit at 7:00 p.m., June 23, 1959, and his body was recovered 14 hours later by his teammate Harold Hudson. Riddle trained frequently in this rockpit by diving to the bottom (45 feet) at the edge, then following the floor of the lake out to the limit of his endurance and surfacing. His body was found 210 feet from shore, face down with snorkel, mask and flippers in normal position. The coroner's autopsy indicated drowning as the cause of death.



Alan M. Riddle

In practice Riddle had achieved free dives just short of 100 feet and had been consistently going to 70 feet for 2½ minute duration, so it is the consensus that he overextended his last dive and blacked out.

Dade County police divers failed to locate Riddle's body the evening of the accident and one police diver was flown to Key West when it was thought he had the bends, although it later developed that he was suffering from air embolism. Hudson recovered the body the

next morning by snorkel diving. Other SEC members on hand for the recovery were Don McGee, Kenny Simpson, Bissell Shaver, Jack Slack, Jack Kearns and Don Meyers.

Riddle had been a commercial fisherman since his discharge from the Coast Guard. During his tour of duty he was stationed at Carysfort light off Key Largo where he developed his skin diving and spearfishing talents. Riddle leaves a widow and two children.

On June 30, 1959 the Southeast Council unanimously adopted the following:

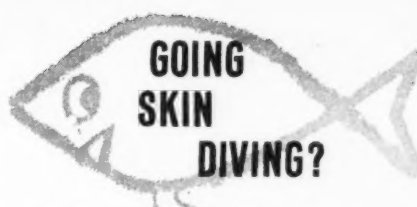
Be it resolved that the perpetual trophy of the Miami Open Spearfishing Tournament shall hereafter be known as the Alan M. Riddle Memorial Trophy of the Southeast Council of Skin Diving Clubs. Alan M. Riddle was an excellent skin diver, superb spearfisherman and wonderful sportsman and it is hoped that his story will be made known to all skin divers, so that they may know the dangers of diving alone.

### MIAMI SKIN DIVERS REPEAT

The perennial Miami Skin Divers topped the southeastern AAU regional contest by a margin of nine points to make them serious contenders for first place in the national contest. The Miami Skin Diver team of Don Del Monico, Paul Dammann and Eugene Shinn scored first place in the shark and grouper categories; second, third and fourth in jacks; third in snappers; fourth in eudas and groupers, to accumulate a total of 26 points.

The Miami Spearmen and Mola Mola International Skin Divers tied for second place with 17 points each. Under the SEC point system ties are broken by totaling the weight of point fish and this gave the place position to the Miami Spearmen team of Jack Kearns, Harold Hudson and Don Meyers. The third place Mola Mola team consisted of Dick Reeves, Jack Slack and Jacques Meyol.

The contest was conducted under the usual Miami weather conditions of clear skies with wind out of the east up to eight miles per hour and seas calming down to glass-smooth in the early afternoon. Underwater visibility ranged up to 100 feet. The point system that is used in Southeast Council contests allows five points for the largest fish in each class, four for the next, etc., to the fifth largest being worth one point. The Miami Skin Divers' 125-pound nurse shark was the only shark of the contest.



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Cayucos, California Phone WY 5-3748  
Hrs. 7-9

**BLUE STAR SUPPLY**  
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Concord, California  
Certified Air 9:30-6:00

**THE SILENT WORLD**  
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Culver City, Calif.  
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**LOUIE THOMAS MARINE CENTER**  
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East Los Angeles, Calif. AN 3-0974  
Hrs. 9-6; Tues & Fri to 9 p.m.

**SKIN DIVER SHOP**  
136 S. Atlantic Blvd., East Los Angeles  
(1 1/2 blk. So. of East L.A. Jr. College)  
Hrs. 10-6, Mon., Wed., Fri. to 8:30

**SEA HUNTER SHOP**  
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Eagle Rock CL 4-2626  
Open till 10 p.m., closed Mon.

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Hours: 9-6 Mon. & Fri. 9-9

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Hrs. 9-5:30; Sat & Sun 8:30-5:30; Closed Wed.

**LA JOLLA DIVERS SUPPLY**  
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1901 Pac. Coast Hwy. (Along P.V. Hills)  
Lamita, Calif. DA 6-6663  
Hours: 9-9, 7 days a week

**UNDERWATER SPORTS SHOP**  
11-39th Place  
Long Beach, Calif.  
Hours: 9:30-6:00, Open 7 days

**ART'S SKIN DIVING SHOP**  
660 W. Florence Ave.  
Los Angeles, PL 8-6059  
Hrs. Sun.-Thur. 9-7, Fri. 9-8, Sat. 8-7

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22774 Pacific Coast Hwy.  
Malibu, Calif. Hrs. 9-6. Closed Tues.  
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4323 W. Coast Hwy.  
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North Hollywood, POplar 4-7344  
Hrs. Fri., Sat. 9-9; Mon.-Thurs. 9-6

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Sales-Rentals-Repairs

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Hrs. 9:30-6; Thurs till 9 p.m.

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**DIVE N' SURF**  
504 No. Broadway  
Redondo Beach, Calif.  
Hours: 9-6 closed Tues. 12 fills \$10

**MEL'S AQUA SHOP**  
1911 So. Catalina Ave.  
Redondo Beach, Calif.  
Hours: 9:30-6:00

**SAN DIEGO DIVERS SUPPLY, INC.**  
4042 Midway Drive  
San Diego 10, Calif.  
Hrs: 9-6, 7 days a week. Certified Air

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San Francisco, Calif.  
Rix Water Pumped Air

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Hrs: 9:30-6, Fri. nite till 9 p.m.

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Santa Ana  
Hrs. 9-9, 9-5:30 Sun. 70 cu. ft. \$1.25

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Hrs. 1-6 Tues.-Thurs.; 1-9 Fri.; 8-6 Sat. & Sun.

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Air available 7 days a week, rentals, instruction  
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**SKIN DIVER—September 1959**

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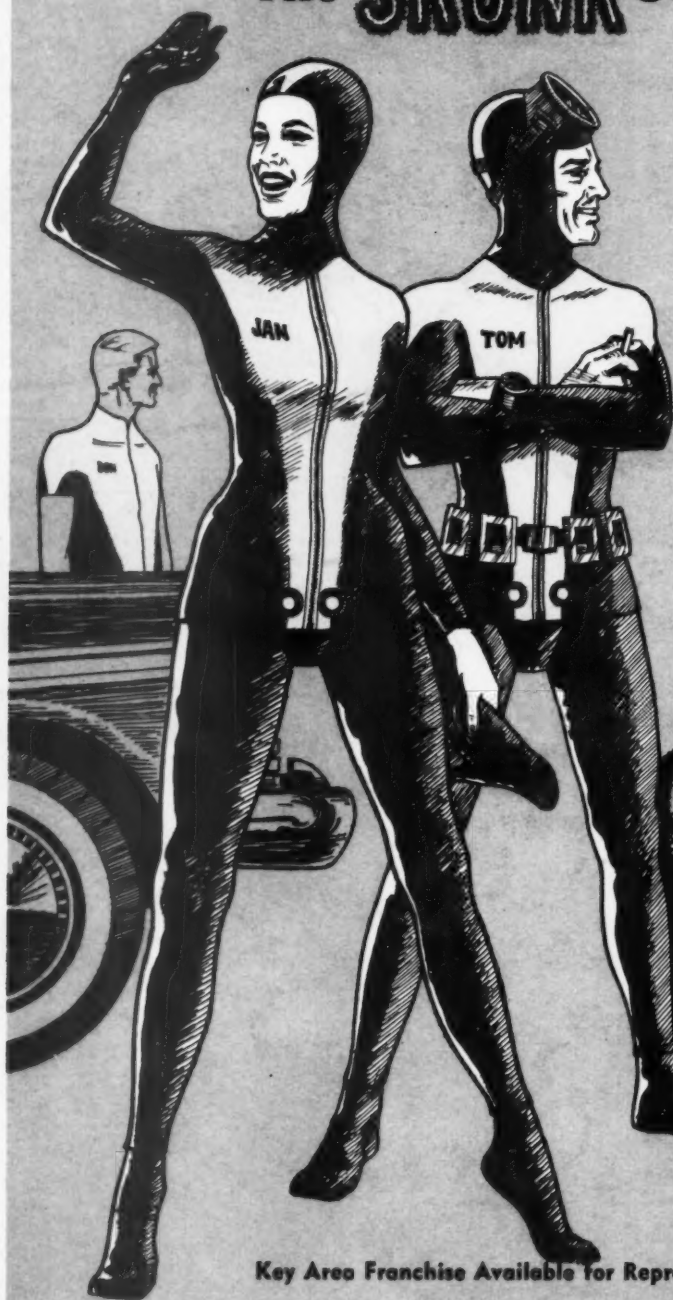
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